#### 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: 2024** 

Years Monitored: 10th 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 17-18, 2024

**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 control and planned beaver dam removal. **Date:** May 1, 2024, October 2024. Weed control efforts by MDT contractor targeted several state-listed noxious weed species in the spring and fall of 2024 including: oxeye daisy, orange hawkweed, common mullein, and spotted knapweed. At the behest of downstream water rights holders, MDT is planning to remove the beaver dam at the outlet of Schrieber Lake in the spring of 2025 to provide sufficient water for downstream water users.

**Specific recommendations for any additional corrective actions:** The MDT weed-control program will conduct weed treatments in the spring/fall of 2025. MDT has received MFWP SPA 124 approval to remove the beaver dam in the Spring of 2025.

**Anticipated Wetland Credit Acres: 13.40** 

Wetland Credit Acres Generated to Date: 14.35

**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 the 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 2024 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 Western Mountains, Valleys and Coast Region (WMVC) Regional Supplement.	Υ	Areas that were identified as wetland habitat within the mitigation site meet the three parameter criteria except for three data points which did not have hydric soil indicators. Wetland status was determined based on strong hydrologic and vegetation indicators at these locations.						
Wetland Hydrology	Wetland hydrology success will be achieved where wetlands meet the technical requirements established in the 1987 Wetland Determination Manual and the 2010 WMVC Regional Supplement. The presence of primary and secondary indicators observed in the field will be utilized to make a formal determination.	Υ	Areas that were identified as wetlands met the definition for wetland hydrology based upon primary and secondary hydrologic indicators observed at the site.						
	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.						
	Combined areal cover of facultative or wetter species is 70 percent or greater.	Υ	Areas identified as wetland habitat within the mitigation site support a prevalence of hydrophytic vegetation (OBL, FACW, and FAC) with combined areal cover greater than 70 percent.						
Hydrophytic	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 2024.						
Vegetation	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. Removal of the old beaver dam at the outlet of Schrieber Lake is anticipated to lower water levels and inundation across the site, which should allow many of the shrubs and trees to reestablish.						
Open Water	The project is intended to provide open water during the spring and early summer within excavated depressions. Open water is defined by USACE as "areas of open water of any depth with less than 5% rooted emergent vegetation, no vegetation, submerged nonrooted vegetation, and/or submerged vegetation rooted in the substrate that does not extend above the water surface" (N. Green, personal communication, May 6, 2020). Open water meeting this definition will, therefore, be considered successful and creditable.	Y	Excavated depressions throughout the entire mitigation area support perennial inundation with an established aquatic macrophyte and evolving emergent vegetative community.						
Upland Buffer	Noxious weeds do not exceed 5 percent cover within upland buffer area.	Υ	Noxious weed cover within the upland buffer areas adjacent to wetlands was estimated at 4 percent and 3 percent, respectively.						

	Any area that was disturbed within the creditable buffer zone must have at least 50 percent areal cover of non-weed species by end of monitoring period.	Υ	Disturbed areas have established greater than 50 percent cover by non-weed species. Predominately non-native grass species dominated the upland buffer area. Total areal cover of vegetation was estimated to be between 80 and 85 percent.
Weed Control	Weed control will be based on annual site monitoring to determine weed species and the degree of infestation within the site.  Control measures based on monitoring results will be implemented by MDT to minimize and/or eliminate the intrusion of state-listed noxious weed species within the site.	Y	State-listed noxious weed species have been identified and mapped during the 2024 monitoring event for weed control efforts in 2025. Weed cover was generally low across the site, with the exception of a few areas that had higher amounts of weeds. MDT's weed-control contractor is scheduled to treat this site in the Spring of 2025 as part of an ongoing weed control program.

Stream Performance Standards									
Performance Standards	Success Criteria	Achi Y,	eria eved /N	Discussion					
		SC <sup>(a)</sup>	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.	Y	Y	A PFC assessment was performed during the 2024 monitoring year within three areas of the site (stream reaches are shown in Figure A-2 in Appendix A & PFC forms in Appendix D). Reach SC1's rating was updated to Functional from Functioning — At Risk in 2024 due to improved vegetation establishment along the bank. While the reach is not yet vegetated to the same level as other reaches at the site, the bank has remained stable over the monitoring period, and it is not considered at risk or requiring additional monitoring. See the Stream Monitoring section for additional details.					
	Creditable buffer areas must have at least 50 percent areal cover of non-weed species by the end of the monitoring period.	Y	Y	All riparian vegetation transects exhibited 50 percent or greater areal cover of non-weed species along both Schrieber and Coyote Creeks.					
Riparian Buffer	Combined areal cover of riparian and streambank vegetation communities is 70 percent or greater.	Υ	Υ	Combined areal cover of riparian and streambank vegetation along Coyote Creek and Schrieber Creek was estimated at 90 percent.					
Success	Noxious weeds do not exceed 5 percent cover within the riparian buffer areas.	Υ	Y	Noxious weed cover within riparian buffer areas adjacent to Schrieber and Coyote Creek was estimated at 3 percent and 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 2024.					
Coyote and Schrieber Creek Channel Restoration Success	Success will be evaluated in terms of revegetation success. For the purpose of identification, bank areas will extend 3 feet (Coyote Creek) or five feet (Schrieber Creek) up the bank from the Ordinary High Water (OHW) mark.  a. Revegetation along the new Coyote and Schrieber Creek channel corridor will be	Y/N	Y	Reach 1 of Schrieber Creek has yet to fully meet the performance criteria established for the development of deep-rooted vegetation within the riparian corridor. The ephemeral nature of this reach resulted in slower vegetation growth and does not have a majority of deep-rooting vegetation. As a result, Reach 1 of Schrieber Creek has not met all success criteria and is, therefore,					

considered successful when the bank area becomes vegetated with a majority of deeprooting riparian plant species having root stability indexes ≥ 6. A plant list of the species occurring along the bank areas 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".	Y/N	Υ	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.
b. New stream channels will be allowed to naturally migrate within the established floodplain/riparian areas and will be given sufficient room to move and stabilize within the site.			

<sup>(</sup>a) SC = Schrieber Creek.

#### **Summary Data**

Wetland Delineation — The total jurisdictional wetland and aquatic habitat at the Schrieber Lake mitigation site in 2024, which includes wetlands, open water, and streams, was 55.46 acres, 0.19 acres less than in 2023 (Table 2; see maps in Appendix A). Total delineated wetlands, which include MDT wetlands, USFS wetlands, and riparian buffers decreased by 0.14 acres to 41.94 acres in 2024 (Table 2; see maps in Appendix A)." Following USACE guidance (N. Green, personal communication, May 6, 2020), areas of open water accounted for 12.52 acres of the site, including areas within Cells 1-10 and the preservation area northwest of Schrieber Lake (4.51 acres), Schrieber Lake (7.72 acres), and Schrieber Lake located on USFS property (0.29 acres).

The extensive wetland development at this site results from excavating wetland cells, constructing channel plugs, and restoring meanders and bed elevations for the Schrieber and Coyote Creek channels. Beaver activity, noted for the first time in 2019, contributed to a shift in wetland development within the site. The beaver dam constructed at the outlet of Schrieber Lake has changed the site's hydrologic regime, resulting in an expansion of perennial deepwater inundation in some wetland areas and inhibiting woody shrub expansion in others. Initially, the beaver dam increased open water within the site, accounting for 14.24 acres in 2020. However, native floating and emergent vegetation has established within many of the open water areas, especially within cells 1-10, reducing the open water area to 12.52 acres in 2024.

Table 2. Upland, Wetland, & Aquatic Habitat Acreage Delineated From 2015 and 2019-2024

Habitat Type	2015 Acres	2019 Acres	2020 Acres	2021 Acres	2022 Acres	2023 Acres	2024 Acres
Uplands	52.6	52.6	49.47	49.12	49.17	49.05	49.24
Wetlands							
USFS wetlands (no credit)	1.25	1.25	1.66	1.66	1.66	1.63	1.71
MDT wetlands	37.65	37.65	34.43	35.43	36.77	36.55	36.33
Riparian Buffer (no wetland credit)	3.90	3.90	3.90	3.90	3.90	3.90	3.90
Total Delineated Wetlands	42.84	42.84	39.99	40.9	42.33	42.08	41.94
Open Water							
Schrieber Lake* (no credit)	8.26	8.26	8.00	8.00	8.00	7.58	7.72
Schrieber Lake on USFS property* (no credit)						0.37	0.29
Open Water* (Cells 1-10 & Preservation Area northwest of Schrieber Lake)	N/A	N/A	6.24	5.68	4.20	4.62	4.51
Total Open Water	8.26	8.26	14.24	13.68	12.20	12.57	12.52

<sup>(</sup>b) CC = Coyote Creek.

Habitat Type	2015 Acres	2019 Acres	2020 Acres	2021 Acres	2022 Acres	2023 Acres	2024 Acres
Streams							
Schrieber & Coyote Creeks (no wetland credit)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Total Wetland and Aquatic Habitat	52.1	52.1	55.23	55.58	55.53	55.65	55.49
Project Area	104.70	104.70	104.70	104.70	104.70	104.70	104.70

<sup>\*</sup>Schrieber Lake and other open water areas all meet the USACE definition of open water and are mapped in Figures A-3 to A-5 in Appendix A.

**Vegetation** – A total of 126 plant species have been identified at the site between 2015 and 2024, with five new wetland species and two new upland species identified during the 2024 monitoring event. Four wetland, five upland, and one open water community type were identified and mapped at the mitigation site in 2024 (Figure A-3, Appendix A). Dominant plant species observed within each community are listed on the Wetland Mitigation Site Monitoring form (Appendix B). The vegetation community types and open water community type identified on the site in 2024 include the following:

- Upland Type 1 Elymus repens / Bromus inermis
- Upland Type 5 Pseudotsuga menziesii / Larix occidentalis
- Upland Type 9 Crataegus douglasii / Symphoricarpos albus
- Upland Type 13 Alopecurus spp. / Phalaris arundinacea
- Upland Type 14 *Alopecurus pratensis*
- Wetland Type 3 Phalaris arundinacea / Carex spp.
- Wetland Type 8 Carex spp.
- Wetland Type 10 Typha latifolia
- Wetland Type 15 Betula pumila / Salix spp.
- Open Water Type 11 Open Water / Aquatic macrophytes (considered open water, not classified as an emergent vegetation community type)

A notable shift in species cover and dominance due to the active beaver dam impounding surface water continued in 2024. Inundation levels within the wetlands averaged 1.5-2.5 feet, similar to the conditions observed in 2023. The increase in inundated acreage since the creation of the beaver dam has reduced the overall coverage of reed canarygrass and broken up the former monoculture, which has allowed for an increase in native herbaceous species such as sedges (*Carex* spp.) and water smartweed (*Persicaria amphibia*). Extended periods of flooding have been shown to reduce non-native reed canarygrass cover, germination, and rhizome production effectively (Jenkins et al. 2008; WRCGM 2009; Waggy 2010), which allows a greater diversity of native vegetation to establish. However, the increase in inundation has reduced the cover of native shrubs, especially in the Wetland Type 2 – *Betula pumila/Salix* spp. carr (shrub fen) in the southwest part of the site and in community types that were removed in previous years because of a loss of shrub cover.

Vegetation cover was measured along three belt transects (T-1, T-2, and T-3) in 2024 (Figure A-2, Appendix A). Photographs of the transect endpoints are provided in Appendix C. Perennial surface water observed within the wetland vegetation communities along all three transects (i.e., Wetland Types 3 and 8) that exhibited greater than 5% emergent vegetation and were less than 0.1 acres in size were classified as part of the surrounding hydrophytic vegetation community and not as open water. Instead, the "Estimated % Unvegetated Surface Water" value in Tables 3 through 5 estimates cover of these small areas of perennial surface water observed within wetland plant communities along the transects. The "% Transect Length Comprising Open Water" value summarizes the length of the transect occupied by Open Water Type 11.

Table 3 summarizes the data for T-1 from 2016 and 2021 through 2024. T-1 is 284 feet long and intersects WT 3 and 10. The transect was entirely within hydrophytic vegetation communities in 2024. Hydrophytic vegetation cover accounted for 60 percent of the transect length in 2024, the same as in 2023. Unvegetated surface water, a component within the communities, was 0.5-2.5 feet deep and accounted for the remaining 40 percent of the transect in 2024.

Table 3. Data Summary for T-1 From 2016 and 2021 through 2024 at the Schrieber Lake Site

Monitoring Year	2016	2021	2022	2023	2024
Transect Length (feet)	284	284	284	284	284
Vegetation Community Transitions Along Transect	3	2	2	2	2
Vegetation Communities Along Transect	3	1	1	2	2
Hydrophytic Vegetation Communities Along Transect	3	1	1	2	2
Total Vegetative Species	9	6	7	8	8
Total Hydrophytic Species	8	6	6	8	8
Total Upland Species	1	0	0	0	0
Estimated % Total Vegetative Cover	100	75	60	60	60
Estimated % Unvegetated Surface Water	0	25	40	40	40
% Transect Length Comprising Hydrophytic Vegetation Communities	100	97.2	97.2	100	100
% Transect Length Comprising Upland Vegetation Communities	0	0	0	0	0
% Transect Length Comprising Open Water	0	2.8	2.8	0	0
% Transect Length Comprising Mudflat	0	0	0	0	0

Table 4 summarizes the data for T-2 from 2016 and 2021 through 2024. T-2 is 280 feet long and traversed a single community type, WT 8. The transect was entirely within hydrophytic vegetation communities in 2024. Hydrophytic vegetation cover accounted for 80 percent of the transect length in 2024, the same as in 2023. Unvegetated surface water, a component within the communities, was 2-2.5 feet deep and accounted for the remaining 20 percent of the transect in 2024.

Table 4. Data Summary for T-2 From 2016 and 2021 through 2024 at the Schrieber Lake Site

Monitoring Year	2016	2021	2022	2023	2024
Transect Length (feet)	280	280	280	280	280
Vegetation Community Transitions Along Transect	1	1	1	1	1
Vegetation Communities Along Transect	2	2	2	1	1
Hydrophytic Vegetation Communities Along Transect	2	2	2	1	1
Total Vegetative Species	5	6	7	5	6
Total Hydrophytic Species	5	6	7	5	6
Total Upland Species	0	0	0	0	0
Estimated % Total Vegetative Cover	100	85	80	80	80
Estimated % Unvegetated Surface Water	0	15	20	20	20
% Transect Length Comprising Hydrophytic Vegetation Communities	100	100	100	100	100
% Transect Length Comprising Upland Vegetation Communities	0	0	0	0	0
% Transect Length Comprising Open Water	0	0	0	0	0
% Transect Length Comprising Mudflat	0	0	0	0	0

Table 5 summarizes the data for T-3 from 2016 and 2021 through 2024. T-3 is 584 feet long and intersects WT 3 and WT 8. The transect was entirely within hydrophytic vegetation communities in 2024. Hydrophytic vegetation cover accounted for 80 percent of the transect length in 2024. Unvegetated surface water, 0.5-2 feet deep, accounted for the remaining 20 percent of the transect in 2024.

Table 5. Data Summary for T-3 From 2016 and 2021 through 2024 at the Schrieber Lake Site

Monitoring Year	2016	2021	2022	2023	2024
Transect Length (feet)	584	584	584	584	584
Vegetation Community Transitions Along Transect	2	1	1	1	1
Vegetation Communities Along Transect	3	2	2	2	2
Hydrophytic Vegetation Communities Along Transect	2	2	2	2	2
Total Vegetative Species	11	6	6	6	9
Total Hydrophytic Species	10	6	6	6	9
Total Upland Species	1	0	0	0	0
Estimated % Total Vegetative Cover	100	90	85	80	80
Estimated % Unvegetated Surface Water	0	10	15	20	20
% Transect Length Comprising Hydrophytic Vegetation Communities	94	100	100	100	100
% Transect Length Comprising Upland Vegetation Communities	6	0	0	0	0
% Transect Length Comprising Open Water	0	0	0	0	0
% Transect Length Comprising Mudflat	0	0	0	0	0

The presence of species classified as noxious weeds in Montana are mapped in Figure A-3 in Appendix A. 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*), dalmatian toadflax (*Linaria dalmatica*), oxeye daisy (*Leucanthemum vulgare*), St. Johnswort (*Hypericum perforatum*), and field bindweed (*Convolvulus arvensis*). The most common noxious weed species observed on site was Canada thistle.

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 belt transects, woody planting survival was estimated well below the required 50 percent survival. Woody survival is inhibited by a variety of factors, including competition with herbaceous vegetation (particularly non-native reed canarygrass), perennial inundation and/or extremely saturated soil conditions, herbivory by ungulates and rodents, and previous herbicide applications on adjacent noxious weed infestations. No natural recruitment of woody plants has been observed within the site's wetlands due to inundation caused by the beavers. However, some natural recruitment of willows is beginning to occur within the upper reach of Schrieber Creek near channel cross section SC2A-1, where willow coverage within the channel is less than 5 percent.

**Hydrology** – During the 2024 investigation, the average surface water depth across the entire site was estimated at 1.5 feet, with a range of depths from 0.1 to 5 feet. The surface-water depth at the emergent vegetation and open-water boundary was estimated at 2.0 feet. The deepest standing water is located within the excavated cells, creek channels and Schrieber Lake, and the average water depths across the site decreased slightly from 2023, 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.

Approximately 85 percent of the wetlands were inundated during the 2024 site visit. Open water areas with less than 5 percent emergent vegetation in 2024 are mapped in Figures A-3 through A-5 in Appendix A.

In 2024, the beaver dam initially documented in 2019 at the outlet of Schrieber Lake was still present and impounding water. However, in 2023 and 2024, there were no signs of fresh beaver activity such as chewed sticks, freshly placed mud, or beaver tracks, leading the investigators to believe the beaver dam is no longer being maintained by an active beaver colony. The beaver dam is scheduled for removal prior to the 2025 monitoring event, and it is anticipated less open water and shifts in plant communities may result from this action.

**Soils** – Soil test pits were excavated at 19 locations to evaluate the extent of hydric soil development across the site in 2024 (Figure A-5, Appendix A). Soil textures within upland test pits ranged from sandy loam to silt loam. No hydric soil indicators were observed in the upland test pits. Wetland test pits were characterized by soil textures ranging from sand to peat and had hydric soil indicators that included loamy mucky mineral soils, hydrogen sulfide odors, thick dark surfaces, depletion below dark surfaces, histic epipedons, and histosols. Three wetland data points, DP04w, DP05w, and DP09w, had problematic soils with no observed hydric soil indicators but were determined to be within wetlands based on hydrology and vegetation. Additional field observations for the 19 data points are provided in the USACE wetland determination data forms in Appendix B.

Functional Assessment – The 2008 Montana Wetland Assessment Method (MWAM) was used to evaluate the site in 2024 (Appendix B). The Assessment Area (AA) includes all delineated wetlands, including the creditable wetlands (36.33 acres), wetlands within the riparian buffers of Schrieber and Coyote Creeks (3.90 acres), Schrieber Lake and remaining open water areas (12.55 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 (1.71 acres). The wetlands in the AA received a Category I rating and received 93 percent of the total possible functional points in 2024. 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, MTNHP Species Habitat, and Flood Attenuation, which were rated as moderate (Table 6).

Table 6. Montana Wetland Assessment Method Summary for Schrieber Lake

Function and Value Parameters From the 2008 Montana Wetland Assessment Method	2015 Entire Site	2024 Entire Site
Listed/Proposed Threatened & Endangered (T&E) Species Habitat	High (0.8)	Mod (0.8)
Montana Natural Heritage Program (MTNHP) S1, S2, and S3 Species Habitat	Mod (0.6)	High (0.9)
General Wildlife Habitat	Exc (1.0)	Exc (1.0)
General Fish/Aquatic Habitat	Mod (0.7)	Mod (0.7)
Flood Attenuation	Mod (0.6)	Mod (0.6)
Short- and Long-Term, Surface-Water Storage	High (1.0)	High (1.0)
Sediment/Nutrient/Toxicant Removal	High (1.0)	High (1.0)
Sediment/Shoreline Stabilization	High (1.0)	High (1.0)
Production Export/Food Chain Support	High (1.0)	High (1.0)
Groundwater Discharge/Recharge	High (1.0)	High (1.0)
Uniqueness	High (0.9)	High (1.0)
Recreation/Education Potential (bonus points)	Mod (0.1)	High (0.2)
Actual Points/Possible Points	9.7/11	10.2/11
% of Possible Score Achieved	88.2%	93%
Overall Category	I	I

**Wildlife** – The site supports a diversity of wildlife. Twenty-three bird species were identified in 2024 at the Schrieber Lake site. In addition to the bird species, northern Columbia spotted frogs, white-tailed deer, Richardson's ground squirrels, voles, an unidentified turtle species, and one female moose were observed (Appendix B).

**Photographs** – Ten photo points were established in the project area in 2015. Photographs were taken at all ten photo point locations during the 2024 site visit. In addition to established photo points, photographs were taken at each surveyed stream cross-section, sampled data points, and vegetation transect endpoints. The photo point locations are illustrated in Figure A-2 (Appendix A), and 2015 and 2024 photographs are compared in Appendix C. Site photographs associated with previous years' 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 2024 data were evaluated against the previous surveys to assess stream channel stability. In 2024, the banks of the constructed channels exhibited stable conditions and were generally well-vegetated with deep-rooted plant species. The stream monitoring survey indicates that little to no significant channel morphological changes occurred between 2023 and 2024. The stream beds at two of the cross sections, SC7-1 and CC1B-1, were a foot lower than in 2023, but within the range of normal fluctuations seen in previous years. All cross sections exhibited surface water elevations about 0.5 feet lower than what was surveyed in 2023.

The 2024 PFC assessment rated all stream reaches at the site as Functioning, including Schrieber Creek Reach 1 (SC1), which was rated as in proper functioning condition considering the ephemeral nature of the reach. The 2024 PFC assessment forms can be found in Appendix D. Upper Schrieber Creek appears stable and in dynamic equilibrium with the surrounding landscape. The vegetation that has established within the channel is capable of maintaining channel form and function under the current hydrologic regime. In 2024, some willows were observed establishing within the stream channel, although their cover totaled less than 5 percent.

#### Credit Summary - Stream Credits

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

Data collected during the 2024 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 along the majority of the bank area. The ephemeral nature of this reach results in slower vegetation growth. As a result, Reach 1 of Schrieber Creek has not met all success criteria and is, therefore, generating half of the anticipated credits. Reaches 2A, 2B, 3, and 7 of Schrieber Creek and Reaches 1A and 1B of Coyote Creek meet all success criteria and have generated the predicted credits outlined in the monitoring plan. Future monitoring will continue to assess the vegetation establishment within Reach 1 of Schrieber Creek and its status in meeting the success criteria and generating the anticipated stream mitigation credits. The entire Schrieber Lake site has generated approximately 34,349.67 stream credits, which is 2,392.20 credits less than the original projection.

Table 7. 2024 Riparian and Stream Mitigation Credits for the Schrieber Lake Site

Channel Segment	Reach	Side	Predicted Credits	2024 Credits
	1.0	А	4,141.63	4,141.63
County Caroli	1A	В	4,141.63	4,141.63
Coyote Creek	4.0	А	1,586.25	1,586.25
	1B	В	1,692.00	1,692.00
	4	Α	2,392.20	1,196.1
	1	В	2,392.20	1,196.1
	2A	Α	2,722.50	2,722.50
		В	2,722.50	2,722.50
Cabriah an Caral		Α	576.65	576.65
Schrieber Creek	2B	В	576.65	576.65
	3	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
Tota	l		36,741.87	34,349.67

#### **Credit Summary – Wetland Credits**

MDT anticipates generating 13.4 wetland credit acres from the Schrieber Lake project. Proposed mitigation credits from the 2014 Schrieber Lake Mitigation Plan included establishing 3.06 wetland acres, re-establishing 2.53 wetland acres, enhancing 4.53 acres of the fen-carr shrubland, preserving 25.6 acres of existing fen/carr and sedge-dominated areas, and creating a 50-foot upland buffer (3.81 acres) around newly established wetlands in the center of the site. Table 8 summarizes the estimated 2024 wetland credits based on the pending USACE-approved credit ratios and the wetland delineation completed in July 2024. The 2024 wetland delineation identified 36.33 acres of creditable wetlands and 4.51 acres of non-creditable open water within the mitigation site, not including Schrieber Lake.

Creditable wetland acreage included 5.11 acres of created wetlands, 1.14 acres of restored wetlands, 4.77 acres of enhanced wetlands, and 25.09 acres of preserved wetlands, with 3.16 acres of upland buffer around the perimeter of the delineated wetlands. Following the USACE-approved performance standard for this site, open water areas with more than 5 percent cover of submerged and/or floating vegetation will be considered successful and creditable. The open water areas at the site are not considered creditable as they did not meet these criteria. Open water acreage included 2.44 acres of created open water, 1.27 acres of restored open water, and 0.80 acres of preserved open water. Schrieber Lake has never received mitigation credit at this site and is therefore excluded from Table 8. This site's 2024 estimated credit acres have exceeded the proposed credit acres. To date, 14.34 credit acres have been developed at this site. Figure A-4 (Appendix A) shows the location of wetlands based on credit type.

Table 8. Summary of Wetland Mitigation Credits at the Schrieber Lake Site in 2015 and 2023 through 2024

Mitigation Type	Total Proposed Acreage	Ratio	Proposed Credit Acres	2015 Delineated Acreage	2015 Credit Acres	2023 Delineated Acres	2023 Credit Acres	2024 Delineated Acres	2024 Credit Acres
Establishment (Creation)	3.06	1:1	3.06	4.80	4.80	5.72	5.72	5.11	5.11
Establishment (Creation) 'Open Water'(b)		TBD				2.24	TBD	2.44	TBD
Restoration (Re- establishment)	2.53	1.5:1	1.69	2.42	1.62	1.27	0.85	1.14	0.76
Restoration 'Open Water' (b)		TBD			-	1.15	TBD	1.27	TBD
Enhancement areas- Carr Shrubland expansion	4.53	3:1	1.51	4.77	1.59	4.77	1.59	4.77	1.59
Enhancement 'Open Water' (b)		TBD							
Preservation- Existing Fen- Carr-Carex Areas	25.60	4:1	6.40	25.66	6.42	24.79	6.20	25.09	6.27
Preservation 'Open Water' (b)		TBD				1.23	TBD	0.80	TBD
Upland Buffer (50 feet) <sup>(a)</sup>	3.81	5:1	0.76	8.42	1.68	3.01	0.60	3.16	0.63
Permanent Project Impacts	0.02	None	-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	44.16	14.94	43.76	14.34

<sup>(</sup>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 2024 functional unit credits are summarized in Table 9. A total of 140.07 functional unit credits were generated at the Schrieber Lake site after applying the appropriate mitigation ratios to the 2024 wetland acreage and multiplying that value by the functional points generated from the 2024 MWAM assessment.

**Table 9. Functional Unit Credits Summary for Schrieber Lake** 

Mitigation Type	2024 Delineated Acreage	Ratio	2024 Mitigation Credit Acres	MWAM Actual Points <sup>a</sup>	Functional Unit Credits
Establishment (Creation)	5.11	1:1	5.11	10.20	52.12
Establishment (Creation) Open Water	2.44	TBD	TBD	10.20	TBD
Restoration (Re-establishment)	1.14	1.5:1	0.76	10.20	7.75
Restoration Open Water	1.27	TBD	TBD	10.20	TBD
Enhancement – Carr Fen Expansion	4.77	3:1	1.59	10.20	16.22
Preservation – Existing Carr Fen and Carex Areas	25.09	4:1	6.27	10.20	63.98
Preservation Open Water	0.80	TBD	TBD	10.20	TBD
Functional Unit Credits (Mitigation Credit Acres × Actual Points)					140.07

<sup>&</sup>lt;sup>a</sup> Montana Wetland Assessment Method (MWAM) forms can be found in Appendix B.

<sup>(</sup>b) Creditable open water acreage is separated into Creation, Restoration, and Preservation open water. Mitigation ratios and crediting for open water are To Be Determined (TBD) – see USACE-approved performance standard for Open Water (Table 1).

## **Conclusions**

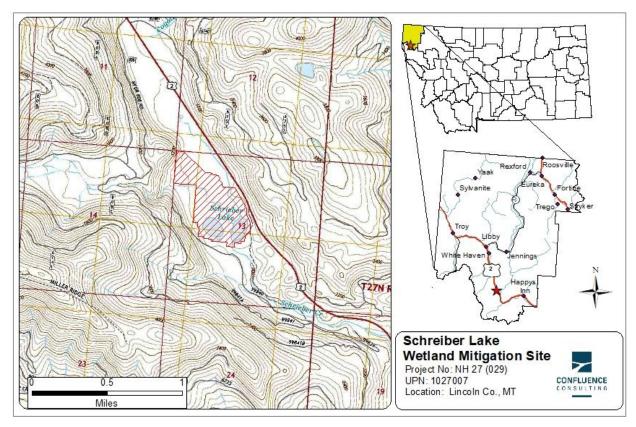
Based on the results of the tenth year of monitoring, the mitigation site is continuing to develop into a diverse wetland ecosystem. The site is meeting all performance standards except the following:

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

Woody plant survival is not expected to meet the established performance standard in 2025. Removal of the beaver dam at the outlet of Schrieber Lake in 2024 is expected to allow shrubs to reestablish within the site with natural recruitment and regrowth in future years. Reach SC-1 along Schrieber Creek is an ephemeral reach that is taking longer for deep-rooted vegetation to establish but is expected to meet this success criterion in the future as it is in an upward trajectory based upon annual monitoring. No remedial actions are recommended at this time.

### Maps, Plans, Photos

Figure 1. Site Location Map



**Project Area Maps/Figures:** See Appendix A (Figure A-2 – 2024 Monitoring Activity Locations; Figure A-3 – 2024 Mapped Site Features; Figure A-4 – 2024 Wetland Credit Areas; Figure A-5 – 2024 Wetland Delineation)

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

**Plant List:** See Appendix B **Photos:** See Appendix C

PFC Assessments, Stream Cross-Sections: See Appendix D

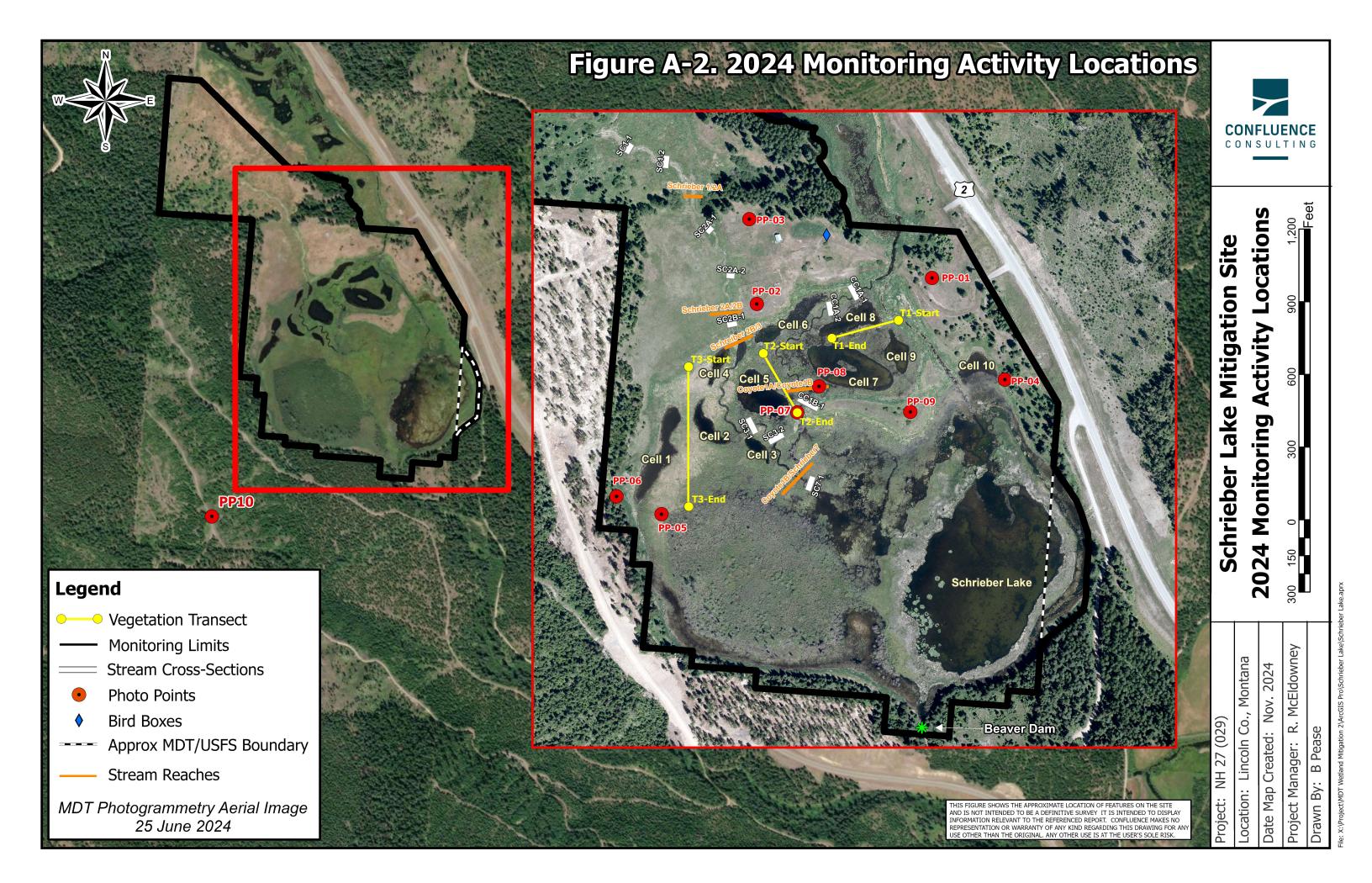
**Plans:** See Appendix D of the 2015 Schrieber Lake Wetland Mitigation Monitoring Report at this website: https://www.mdt.mt.gov/publications/brochures/wetland-mitigation.aspx

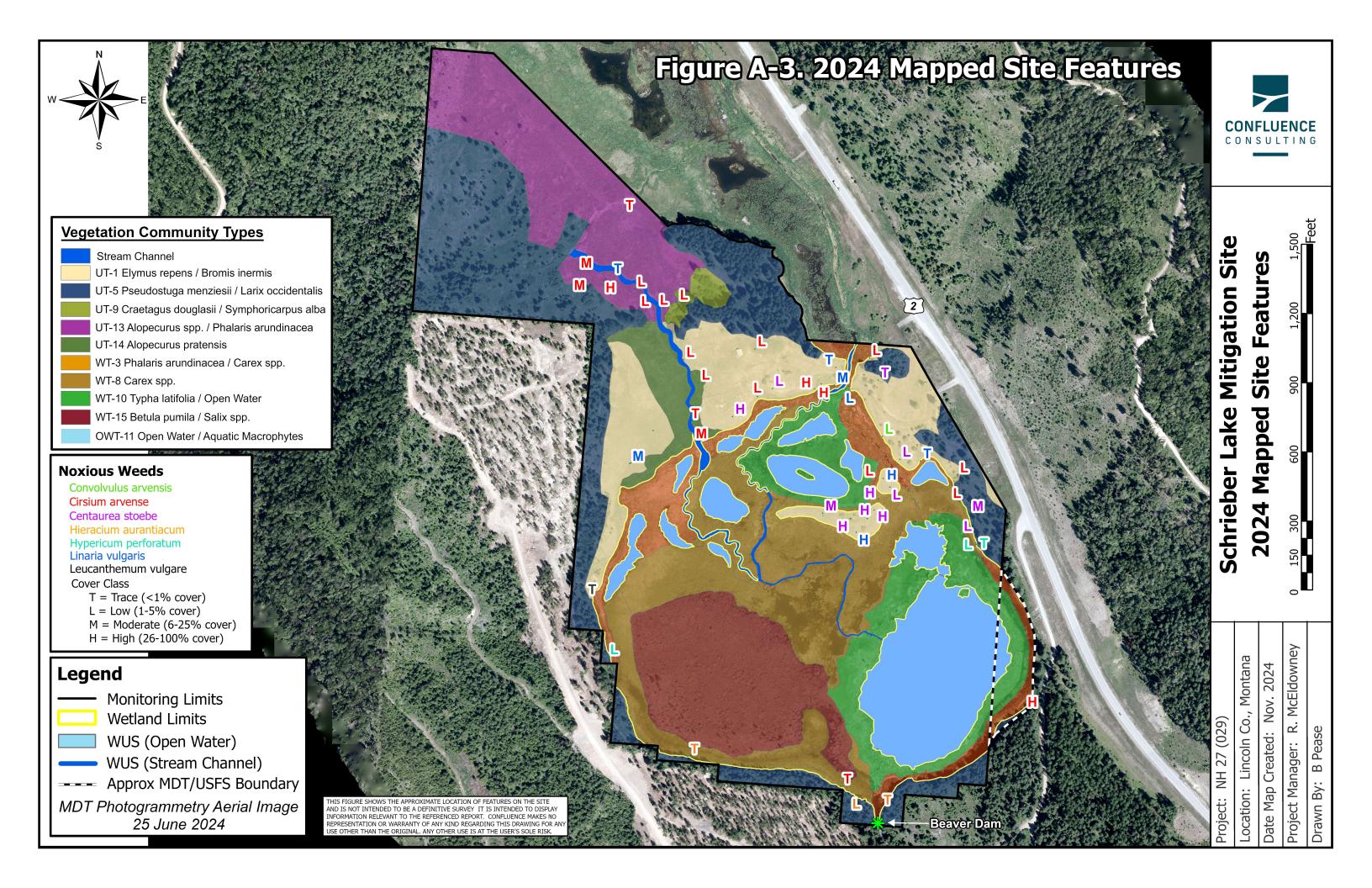
# **References**

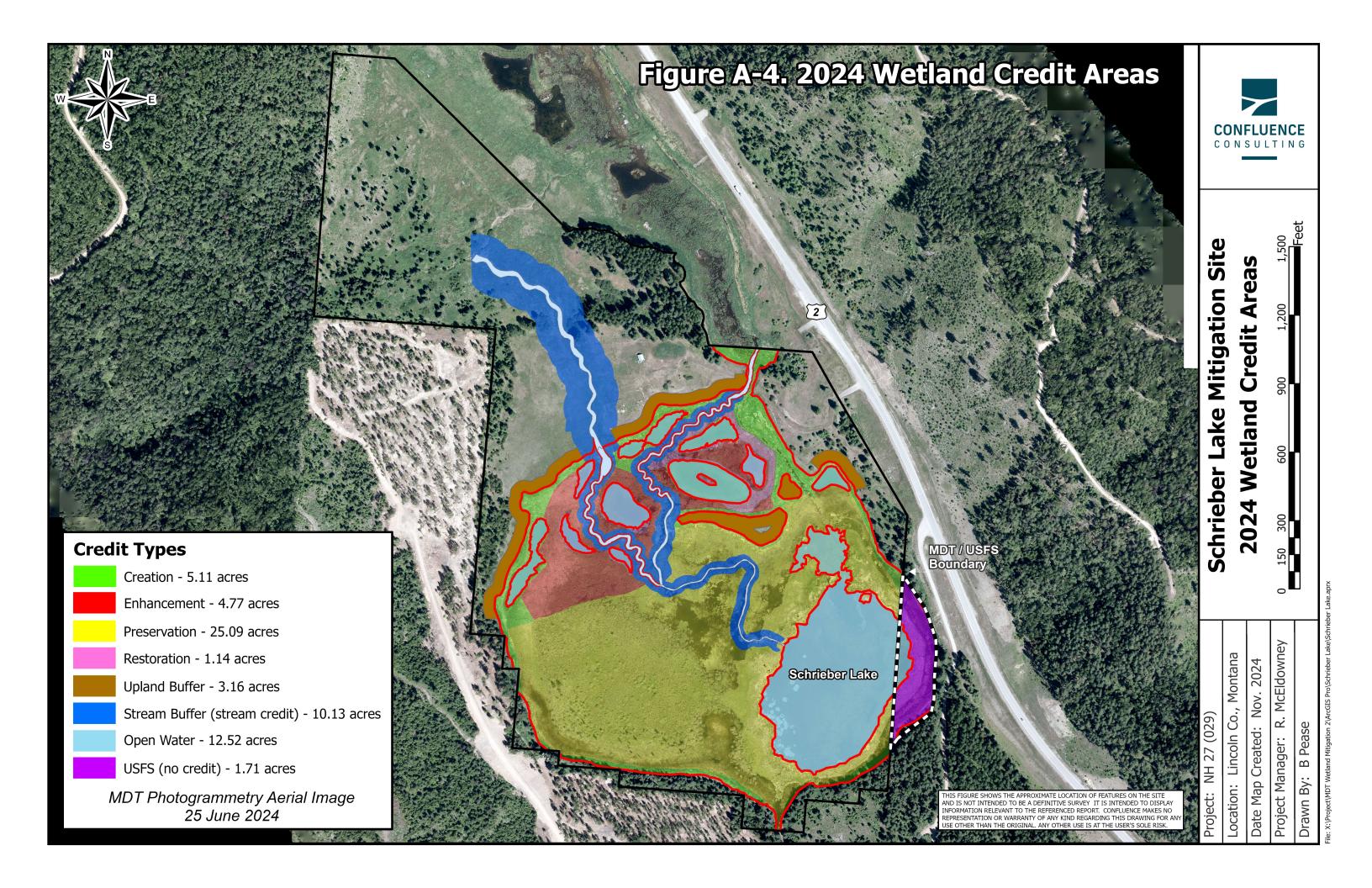
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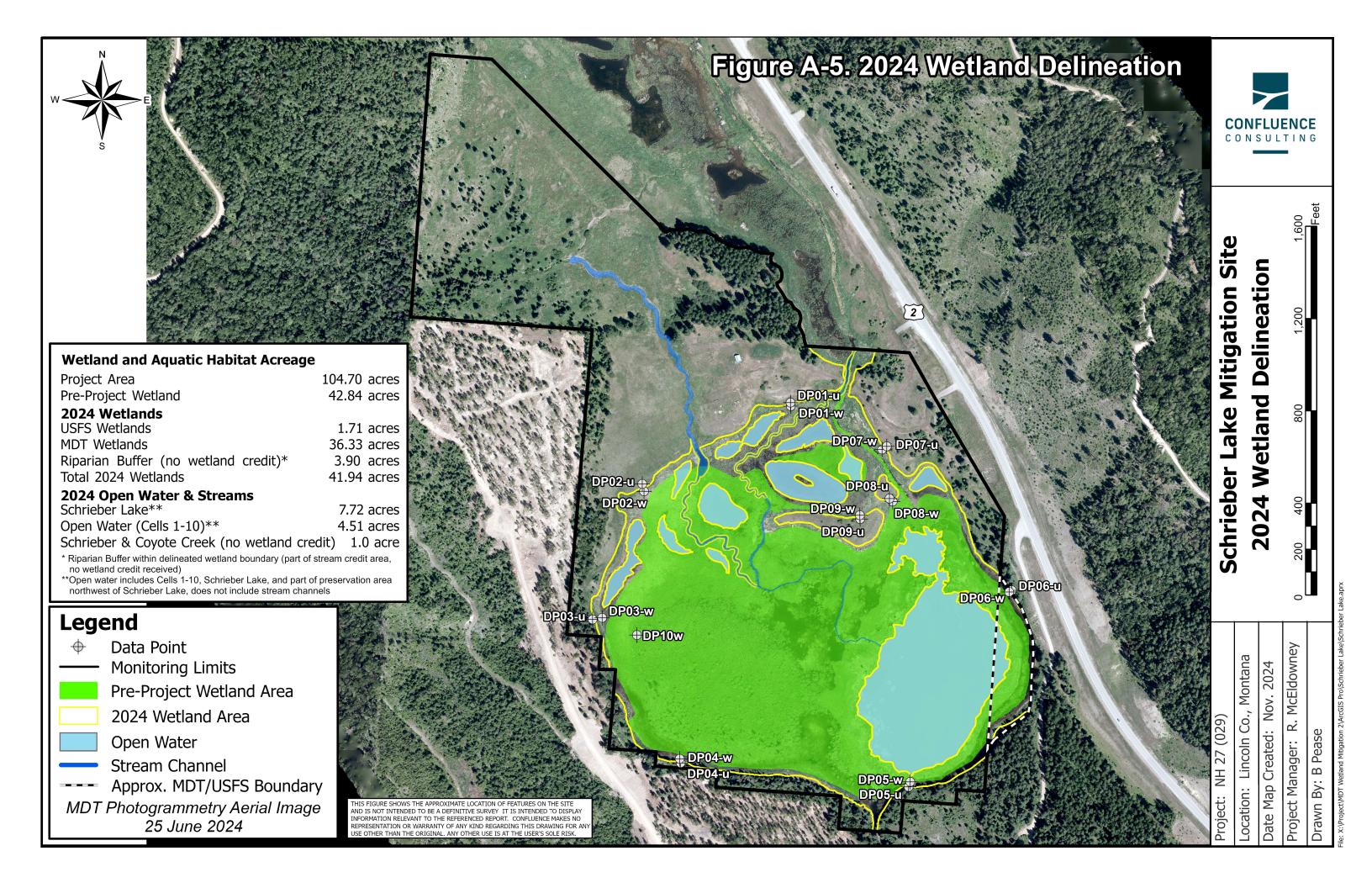
# APPENDIX A PROJECT AREA MAPS

MDT Wetland Mitigation Monitoring Schrieber Lake Lincoln County, Montana









# APPENDIX B MONITORING FORMS

MDT Wetland Mitigation Monitoring Schrieber Lake Lincoln County, Montana

# MDT WETLAND MITIGATION SITE MONITORING FORM

Project Site: S	Schrieber Lake	Assessment Date/Time	<u>7/17/</u> 2024
Person(s) cond	ducting the assessme	nt: R. McEldowney, E. Reynaud, R. Baumgarten	
Weather: 85 d	<u>egrees, cloudy, clear</u>	rLocation: U.S. Highway 2	
MDT District: N	√lissoula	Milepost: 53.8	
		Section(s) 13	
Initial Evaluation	on Date: 5/18/2015	Monitoring Year: <u>10</u> #Visits in Year: <u>1</u>	
Size of Evalua	tion Area: 105 (a	<u>icres)</u>	
	ounding wetland: 2, US Forest Service	e, forested watershed, private lands to the south of the	
		HYDROLOGY	
Surface Water Sou	ırce: Schrieber Cree	ek, Coyote Creek, precipitation, groundwater.	
Inundation:	Average D	epth: 1.5 (ft) Range of Depths: 0.1-5 (ft)	
Percent of assessn	nent area under inund	dation: <u>85 %</u>	
Depth at emergent	vegetation-open water	er boundary: 2 (ft)	
If assessment area	is not inundated ther	n are the soils saturated within 12 inches of surface:Y	es
Other evidence of I	nydrology on the site (	(ex. – drift lines, erosion, stained vegetation, etc:	
deposits, sparsely		table, hydrogen sulfide odor, geomorphic position, iron surfaces, stunted or stressed plants, FAC neutral test, a	and
Groundwater N	Monitoring Wells		
Record depth of	water surface below	v ground surface, in feet.	
Well ID	Water Surface D	epth (ft)	
N/A			
Additional Activities Che	cklist:		
•	getation-open water bounda	ary on aerial photograph.	
	· ·	site visit and look for evidence of past surface water	
•	osion, vegetation staining, e		
Hydrology Notes:	ey groundwater monitoring v	well locations, if present.	
the uplands in the observed in 2019	northern "panhandle through 2024 has sig	ot including Schreiber Lake. 85% inundation does not ince" of the project area. Beaver dam at outlet of Schrieber gnificantly impacted water depths across the site. Depth epest water in channels, excavated depressions, and	Lake

Schrieber Lake.

# **VEGETATION COMMUNITIES**

Site Schrieber Lake

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

Community # 1 Community Type: Elymus repens / Bromus spp. Acres: 11.7

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

Comments:

An upland island of this community type in the middle of the site expanded slightly, by 0.19 acres, in 2024.

Community # 3 Community Type: Phalaris arundinacea / Carex spp. Acres: 6.26

Species	Cover class	Species	Cover class
Agrostis capillaris	1	Alopecurus arundinaceus	1
Alopecurus pratensis	1	Carex aquatilis	2
Carex bebbii	1	Carex lasiocarpa	2
Carex nebrascensis	1	Carex simulata	1
Carex stipata	1	Carex utriculata	3
Carex vesicaria	1	Comarum palustre	1
Deschampsia caespitosa	0	Epilobium ciliatum	1
Geum macrophyllum	0	Juncus filiformis	1
Juncus tenuis	0	Lemna minor	1
Lycopus asper	1	Open Water	2
Persicaria amphibia	1	Phalaris arundinacea	4
Schoenoplectus acutus	0	Scutellaria galericulata	1
Symphyotrichum spathulatum	n 0	Typha latifolia	1

# **Comments:**

No changes were observed in this community type in 2024. Acreage decreased slightly with updated mapping of stream channels.

Community # 5 Community Type: Pseudotsuga menziesii / Larix occidentalis Acres: 22.6

Species	Cover class	Species	Cover class
Abies grandis	2	Agrostis capillaris	1
Alopecurus arundinaceus	1	Alopecurus pratensis	1
Amelanchier alnifolia	1	Arctostaphylos uva-ursi	2
Berberis repens	1	Bromus inermis	2
Calamagrostis rubescens	2	Campanula rotundifolia	0
Carex geyeri	2	Centaurea stoebe	1
Elymus glaucus	1	Elymus repens	1
Hieracium aurantiacum	2	Larix occidentalis	2
Linnaea borealis	1	Penstemon confertus	0
Picea engelmannii	2	Pinus contorta	2
Pseudotsuga menziesii	3	Rosa woodsii	1
Symphoricarpos albus	2		

#### **Comments:**

Upland forested community at edges of wetland boundaries. No changes were observed in 2024.

Community # 8 Community Type: Carex spp. / Acres: 16.66

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

#### Comments:

In 2024, this community was inundated with an average of 1.5 feet of ponded water. The acreage decreased in 2024 with the expansion of an upland island of CT 1 and updated mapping of stream channels and open water boundaries.

Community # 9 Community Type: Crataegus douglasii / Symphoricarpos albus Acres: 0.74

Species	Cover class	Species	Cover class
chillea millefolium	0	Alopecurus arundinaceus	1
lopecurus pratensis	2	Cirsium arvense	1
rataegus douglasii	5	Cynoglossum officinale	0
ctylis glomerata	0	Elymus trachycaulus	1
lium triflorum	0	Phalaris arundinacea	2
mphoricarpos albus	4	Taraxacum officinale	0
tica dioica	0		

## Comments:

Upland community type in the northern portion of project area.

Community # 10 Community Type: Typha latifolia / Open Water Acres: 8.13

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

# **Comments:**

Wetland community type that surrounds Schrieber Lake and open water areas. Acreage increased in 2024 with updated mapping of stream channels and changes to open water boundaries.

Community # 11 Community Type: Open Water / Aquatic macrophytes Acres: 12.52

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 is 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: 11.55

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

#### Comments:

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

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

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

#### Comments:

Upland CT created in 2022 which replaced a portion of CT1 - Elymus/Bromus because of the increase in dominance of Alopecurus pratensis. The area appears to be slightly wetter than the adjacent CT1, which is slightly higher in elevation. No changes to this community type were observed in 2024.

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

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

#### Comments:

Many of the shrubs in this CT have struggled to thrive due to perennial inundation caused by the beaver dam at the outlet of Schrieber Lake.

Community # 99 Community Type: Stream Channel / Acres: 1.31

Species Cover class Species Cover class

# Comments:

Mapped stream channel within the Schrieber Lake project area.

Total Vegetation Community Acreage

104.7

#### **VEGETATION TRANSECTS**

Transect Numbe	r: <u> </u>	Compa	ss Direction from St	art: <u>251</u>
Interval Data: Ending Station	30	Community Type:	Phalaris arundinacea / Car	ex spp.
Species		Cover class	Species	Cover class
Bare Ground		1	Carex lasiocarpa	2
Carex utriculata		3	Carex vesicaria	1
Lemna minor		2	Persicaria amphibia	2
Phalaris arundinacea		5		
Ending Station	284	Community Type:	Typha latifolia / Open Wate	r
Species		Cover class	Species	Cover class
Aquatic macrophytes		4	Carex aquatilis	0
Carex vesicaria		1	Lemna minor	1
Open Water		2	Persicaria amphibia	5
Phalaris arundinacea		3	Typha latifolia	3

The first 30' of Transect 1 was saturated but did not contain surface water. From 30-284 water depth averaged around 8" and cattail cover decreased, while water smartweed increased in cover. Boats were used to access transect.

Transect Number: <sup>2</sup> Compass Direction from Start: <sup>152</sup>

# **Interval Data:**

Ending Station 280 Community Type: Carex spp. /

Species	Cover class	Species	Cover class
Carex utriculata	5	Carex vesicaria	3
Eleocharis palustris	0	Lemna minor	2
Open Water	3	Persicaria amphibia	4
Phalaris arundinacea	1		

# **Transect Notes:**

In 2024 this transect spanned one vegetation community because of the expansion of sedges and a reduction in reed canarygrass in the perennially inundated portions of the project area. Cover by northwest territory sedge increased significantly in 2024.

Transect Number: 3 Compass Direction from Start: 175

**Interval Data:** 

Ending Station	325 Community Type:	Phalaris arundinacea / Carex spp.		
Species	Cover class	Species	Cover class	
Bare Ground	2	Carex bebbii	0	
Carex utriculata	3	Carex vesicaria	3	

Phalaris arundinacea

5

Persicaria amphibia 1
Typha latifolia 0

Ending Station 584 Community Type: Carex spp. /

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

# **Transect Notes:**

The northern portion of this transect did not contain surface water, while the southern portion had up to 6" of surface water.

#### PLANTED WOODY VEGETATION SURVIVAL

Schrieber Lake

Planting Type #Planted #Alive Notes

Various Species

1500

#### **Comments**

MDT planted 1,500 woody plants in the riparian buffer along Schrieber Creek, Coyote Creek, and around some wetland excavations. In 2020-2024, based on observations at the 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 canarygrass is problematic, as are the deep perennial inundation conditions present in most of the wetland habitat across the site. Woody plantings along the upper Schrieber Creek corridor were adversely affected by previous weed spraying activities.

# Schrieber Lake

# **WILDLIFE**

# **Birds**

Were man-made nesting structures installe	ed? Yes	
If yes, type of structure: Bird Boxes		
How many?2		
Are the nesting structures being used?	No	
Do the nesting structures need repairs?	Yes	

# **Nesting Structure Comments:**

There are no longer bird boxes attached to posts at either bird box location, however, there were signs of nesting within a cavity in one of the bird box posts.

Species	Observed	Behavior	Habitat	
American Robin	2			
Black-capped Chickade	e 1			
Canada Goose	17			
Cassin's Vireo	1			
Cedar Waxwing	2			
Chestnut-backed Chicka	adee 1			
Common Yellowthroat	2			
Dark-eyed Junco	1			
Golden-crowned Kinglet	1			
Hairy Woodpecker	1			
Hummingbird	1			
Mallard	5			
Northern Flicker	1			
Phalarope	1			
Pine Siskin	1			
Red-breasted Merganse	er 2			
Red-winged Blackbird	14			
Song Sparrow	2			
Sora	1			
Warbling Vireo	1			
Western Tanager	1			
Wilson's Snipe	1			

9

#### **Bird Comments**

An abundance of bird species was observed 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	3	No	No	No	
Moose	1	No	Yes	No	
Richardson's Ground Squirrel	1	No	No	No	
Turtle spp.	3	No	No	No	
Vole	2	No	No	No	
White-tailed Deer	5	Yes	Yes	No	

# Wildlife Comments:

A diversity of bird and wildlife species utilize the site.

#### Schrieber Lake

# **PHOTOGRAPHS**

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

# **Photograph Checklist:**

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

Photo #	Latitude	Longitude	Bearing	Description
CC1A-1	48.106803	-115.410891	320	CC1A-1 north bank
CC1A-1	48.106803	-115.410891	50	CC1A-1 upstream
CC1A-2	48.1066	-115.41127	355	CC1A-2 north bank
CC1A-2	48.1066	-115.41127	85	CC1A-2 upstream
CC1B-1	48.105509	-115.411518	110	CC1B-1 east bank
CC1B-1	48.105509	-115.411518	200	CC1B-1 downstream
DP01-u	48.106878	-115.411242		Data point
DP01-w	48.106836	-115.411233		Data point
DP02-u	48.105782	-115.413755		Data point
DP02-w	48.105695	-115.413715		Data point
DP03-u	48.104127	-115.414452		Data point
DP03-w	48.104155	-115.414286		Data point
DP04-u	48.102505	-115.412703		Data point
DP04-w	48.102554	-115.412725		Data point
DP05-u	48.102427	-115.408638		Data point
DP05-w	48.102488	-115.408617		Data point
DP06-u	48.104847	-115.407074		Data point
DP06-w	48.104824	-115.40712		Data point
DP07-u	48.106446	-115.40948		Data point
DP07-w	48.106405	-115.409559		Data point
DP08-u	48.105829	-115.409362		Data point
DP08-w	48.105797	-115.409301		Data point

DP09-u	48.105561	-115.409855		Data point
DP09-w	48.105605	-115.409864		Data point
DP10w	48.103981	-115.4136463		Data point
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 north 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 north bank
SC2A-1	48.107386	-115.413401	45	SC2A-1 northeast bank
SC2A-1	48.107386	-115.413401	315	SC2A-1 downstream
SC2A-2	48.106889	-115.41299	275	SC2A-2 west bank
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 west bank
SC3-1	48.105212	-115.412439	240	SC3-1 upstream
SC3-1	48.105212	-115.412439	330	SC3-1 north bank
SC3-2	48.10509	-115.412014	160	SC3-2 downstream
SC3-2	48.10509	-115.412014	70	SC3-2 east bank

SC7-1	48.104608	-115.41138	110	SC7-1 downstream
SC7-1	48.104608	-115.41138	20	SC7-1 north 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
✓ ✓ Iines,	Map emergent vegetation/open water boundary on aerial photos.  Observe extent of surface water. Look for evidence of past surface water elevations (e.g. drift vegetation staining, erosion, etc).
	Photos
 	One photo from the wetland toward each of the four cardinal directions One photo showing upland use surrounding the wetland. One photo showing the buffer around the wetland One photo from each end of each vegetation transect, toward the transect
	Vegetation
✓ Ma	p vegetation community boundaries
✓ Cor	mplete Vegetation Transects
	Soils
✓ As:	sess soils
	Wetland Delineations
<b>✓</b> Supple	Delineate wetlands according to applicable USACE protocol (1987 form or ement)
<b>✓</b>	Delineate wetland – upland boundary onto aerial photograph.
Wetlaı	nd Delineation Comments
55.	e total wetland and aquatic habitat delineated at the Schrieber Lake mitigation site in 2024 was 66 acres, an increase of 0.01 acres since 2023. Schrieber Lake occupied 8.05 acres on MDT operty and remaining open water areas represented a total of 4.51 acres.
	Functional Assessments
✓ forms.	Complete and attach full MDT Montana Wetland Assessment Method field
Functi	onal Assessment Comments:
Cla	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.

There are no longer bird boxes attached to posts at either bird box location, however, there were signs of nesting within a cavity in one of the bird box posts.

Project/Site: Schrieber Lake	(	City/Cou	<sub>unty:</sub> Linc	coln County	Sampling Date: 2024-07-17
Applicant/Owner: Montana Dept. of Transportation	1			State: Montana	Sampling Point: DP01u
Investigator(s): R Baumgarten		Section,	, Townshi	o, Range: S13 T27N R30W	
Landform (hillslope, terrace, etc.): Shoulder				=	
Subregion (LRR): E 43A					
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terrace					
Are climatic / hydrologic conditions on the site typical for this				<u></u>	
Are Vegetation, Soil, or Hydrologysi	-			Are "Normal Circumstances" pr	
Are Vegetation, Soil, or Hydrology na					
SUMMARY OF FINDINGS – Attach site map s					
		Samp	ning po	int locations, transects,	
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No		Is	s the San	pled Area	
Wetland Hydrology Present? Yes No	, <del></del>	v	within a W	/etland? Yes	No
Remarks:	· <u> </u>				
Upland data point at north end of pro	iect ar	ea.			
Opiana data point at north end of pro	Joot air	cu.			
<b>VEGETATION</b> – Use scientific names of plant	s.				
Tree Stratum (Plot size: 30 ft r	Absolute				heet:
	% Cover			Number of Dominant Sp	
1 2				That Are OBL, FACW, or	. FAC. <u>-                                   </u>
3.				Total Number of Domina Species Across All Strata	^
4.					( )
			l Cover	Percent of Dominant Spe That Are OBL, FACW, or	ecies r FAC: 33.33 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r )				Prevalence Index work	
1				Total % Cover of:	Multiply by:
2				OBL species 0	x 1 = 0
3				FACW species 20	x 2 = 40
4 5.				FAC species 15	x 3 = <u>45</u>
J		= Total	l Cover		x 4 = <u>80</u>
Herb Stratum (Plot size: 5 ft r )		Total	1 00101		x 5 = 200
1. Bromus inermis	40		UPL	Column Totals: 95	(A) <u>365</u> (B)
2. Pascopyrum smithii	20			— Prevalence index	= B/A = <u>3.84</u>
3. Phalaris arundinacea	20			Hydrophlytic vegetation	n Indicators:
4. Alopecurus pratensis	10 5		FAC	1 - Napid 163(1011)	ydrophytic Vegetation
5. Cirsium arvense			FAC	2 - Dominance rest	
6				3 - Prevalence Index	
7					daptations <sup>1</sup> (Provide supporting or on a separate sheet)
8				5 - Wetland Non-Va	•
9 10					hytic Vegetation <sup>1</sup> (Explain)
11.				Indicators of hydric soil	and wetland hydrology must
	95	= Total	Cover	be present, unless distur	bed or problematic.
Woody Vine Stratum (Plot size:)		_			
1				Hydrophytic	
2				Vegetation Present? Yes	No
% Bare Ground in Herb Stratum 5		= Total	Cover		
Remarks:					
Phalaris arundinacea is present but does	s not an	near	to he t	hriving Site did not m	neet any hydronhytic
vegetation indicators.	σε αρ	Pour		g. Oito did not ii	.oot any my anopmy ao

SOIL Sampling Point: DP01u

Profile Descri	Matrix		Redox Features	2	
(inches)	Color (moist)		Color (moist) % Type <sup>1</sup> Lo	c <sup>2</sup> Texture	Remarks
	10YR 2/1	100		Loamy Sand	
5 - 15	10YR 2/1	100		Loam	Rocks.
-					
					-
<del>-</del> -					
			=Reduced Matrix, CS=Covered or Coated Sal		cation: PL=Pore Lining, M=Matrix.
•	`	cable to all	LRRs, unless otherwise noted.)		ors for Problematic Hydric Soils <sup>3</sup> :
Histosol (A	•		Sandy Redox (S5)		m Muck (A10)
	pedon (A2)		<ul><li>Stripped Matrix (S6)</li><li>Loamy Mucky Mineral (F1) (except MLR</li></ul>		l Parent Material (TF2) y Shallow Dark Surface (TF12)
Black Hist	Sulfide (A4)		Loamy Gleyed Matrix (F2)		er (Explain in Remarks)
	Below Dark Surfa	ce (A11)	Depleted Matrix (F3)	0	er (Explain in Remarks)
	k Surface (A12)	,	Redox Dark Surface (F6)	<sup>3</sup> Indicato	ors of hydrophytic vegetation and
Sandy Mu	ucky Mineral (S1)		Depleted Dark Surface (F7)	wetla	and hydrology must be present,
	eyed Matrix (S4)		Redox Depressions (F8)	unles	ss disturbed or problematic.
Restrictive La	ayer (if present):				
Type:			<u></u>		
Depth (inch	nes):			Hydric Soil	Present? Yes No
	soil indica	tors ob	served.		
No hydric			served.		
No hydric	SY rology Indicators	:	served. d; check all that apply)		ndary Indicators (2 or more required)
No hydric	SY rology Indicators ators (minimum of	:			ndary Indicators (2 or more required) Vater-Stained Leaves (B9) ( <b>MLRA 1, 2,</b>
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate	rology Indicators stors (minimum of Vater (A1) er Table (A2)	:	d; check all that apply)	V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturation	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3)	:	d; check all that apply)  Water-Stained Leaves (B9) (excep  MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)	V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10)
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate  Saturation  Water Ma	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1)	:	d; check all that apply)  Water-Stained Leaves (B9) (excep	V C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate  Saturation  Water Ma  Sediment	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rrks (B1) Deposits (B2)	:	d; check all that apply)  Water-Stained Leaves (B9) (excep	t V C C S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Staturation Visible on Aerial Imagery (C9
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate  Saturation  Water Ma  Sediment  Drift Depo	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3)	:	d; check all that apply)  Water-Stained Leaves (B9) (excep	V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rrks (B1) Deposits (B2) osits (B3) or Crust (B4)	:	d; check all that apply)  Water-Stained Leaves (B9) (excep	V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Staturation Visible on Aerial Imagery (C9 Seomorphic Position (D2) Shallow Aquitard (D3)
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate  Saturation  Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rrks (B1) Deposits (B2) osits (B3) or Crust (B4) esits (B5)	:	d; check all that apply)  Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil	V C C S g Roots (C3) G S S ls (C6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Seomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) rrks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) soil Cracks (B6)	: one require	d; check all that apply)  Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Stunted or Stressed Plants (D1) (Li	t V E E S g Roots (C3) G S ls (C6) F RR A) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)  Staised Ant Mounds (D6) (LRR A)
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate  Saturation  Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo  Surface S  Inundation	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) soil Cracks (B6) n Vis ble on Aerial	: one require	d; check all that apply)  Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Stunted or Stressed Plants (D1) (LI	t V E E S g Roots (C3) G S ls (C6) F RR A) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Seomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Water  Saturation  Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo  Surface S  Inundatior  Sparsely N	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) esits (B5) soil Cracks (B6) n Vis ble on Aerial Vegetated Concav	: one require	d; check all that apply)  Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Stunted or Stressed Plants (D1) (LI	t V E E S g Roots (C3) G S ls (C6) F RR A) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)  Staised Ant Mounds (D6) (LRR A)
Wetland Hydr Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely V	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations:	: one require Imagery (B	d; check all that apply)  — Water-Stained Leaves (B9) (excep	t V E E S g Roots (C3) G S ls (C6) F RR A) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)  Staised Ant Mounds (D6) (LRR A)
No hydric  IYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely With the server and the s	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: r Present?	: one require Imagery (B ve Surface (	d; check all that apply)  — Water-Stained Leaves (B9) (excep	t V E E S g Roots (C3) G S ls (C6) F RR A) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)  Staised Ant Mounds (D6) (LRR A)
No hydric  IYDROLOG  Wetland Hydr  Primary Indica  Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely Water Water Table P	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) nrks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: r Present?	: one require Imagery (B ve Surface ( Yes Yes	d; check all that apply)  Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Stunted or Stressed Plants (D1) (LI  Other (Explain in Remarks)  No  Depth (inches):  No  Depth (inches):	t V V E E S g Roots (C3) S S (S6) F RR A) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)  Staised Ant Mounds (D6) (LRR A)  Trost-Heave Hummocks (D7)
No hydric  IYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely Water Water Table P Saturation Pre (includes capil	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: r Present? eresent? elsent?	: one require Imagery (B ve Surface ( Yes Yes Yes	d; check all that apply)  Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Stunted or Stressed Plants (D1) (LI  7)  Other (Explain in Remarks)  No  Depth (inches):  No  Depth (inches):	t V E	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)  Staised Ant Mounds (D6) (LRR A)
No hydric  IYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely Water Water Table P Saturation Pre (includes capil	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: r Present? eresent? elsent?	: one require Imagery (B ve Surface ( Yes Yes Yes	d; check all that apply)  Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Stunted or Stressed Plants (D1) (LI  Other (Explain in Remarks)  No  Depth (inches):  No  Depth (inches):	t V E	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)  Staised Ant Mounds (D6) (LRR A)  Trost-Heave Hummocks (D7)
No hydric  IYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely Water Water Table P Saturation Pre (includes capil	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: r Present? eresent? elsent?	: one require Imagery (B ve Surface ( Yes Yes Yes	d; check all that apply)  Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Stunted or Stressed Plants (D1) (LI  7)  Other (Explain in Remarks)  No  Depth (inches):  No  Depth (inches):	t V E	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)  Staised Ant Mounds (D6) (LRR A)  Trost-Heave Hummocks (D7)
No hydric  IYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely Water Water Table P Saturation Pre (includes capil	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: r Present? eresent? ellary fringe)	: one require Imagery (B ve Surface ( Yes Yes Yes	d; check all that apply)  Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Stunted or Stressed Plants (D1) (LI  7)  Other (Explain in Remarks)  No  Depth (inches):  No  Depth (inches):	t V E	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)  Staised Ant Mounds (D6) (LRR A)  Trost-Heave Hummocks (D7)
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W High Water Saturation Water Mal Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely \ Field Observa Surface Water Water Table P Saturation Pre (includes capil Describe Reco	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) soits (B3) or Crust (B4) soits (B5) soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: r Present? esent? elsent? elsent? elsent? elsent (stream	: one require Imagery (B re Surface ( Yes Yes Yes	d; check all that apply)  — Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)  — Salt Crust (B11)  — Aquatic Invertebrates (B13)  — Hydrogen Sulfide Odor (C1)  — Oxidized Rhizospheres along Living — Presence of Reduced Iron (C4)  — Recent Iron Reduction in Tilled Soil — Stunted or Stressed Plants (D1) (LI 7) — Other (Explain in Remarks)  B8)  No   Depth (inches):  No  Depth (inches):  Depth (inches):  Onitoring well, aerial photos, previous inspection	t V E	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)  Staised Ant Mounds (D6) (LRR A)  Trost-Heave Hummocks (D7)
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W High Water Saturation Water Mal Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely \ Field Observa Surface Water Water Table P Saturation Pre (includes capil Describe Reco	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) soits (B3) or Crust (B4) soits (B5) soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: r Present? esent? elsent? elsent? elsent? elsent (stream	: one require Imagery (B re Surface ( Yes Yes Yes	d; check all that apply)  Water-Stained Leaves (B9) (excep MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soil  Stunted or Stressed Plants (D1) (LI  7)  Other (Explain in Remarks)  No  Depth (inches):  No  Depth (inches):	t V E	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Staturation Visible on Aerial Imagery (C9)  Seomorphic Position (D2)  Shallow Aquitard (D3)  AC-Neutral Test (D5)  Staised Ant Mounds (D6) (LRR A)  Trost-Heave Hummocks (D7)

Project/Site: Schrieber Lake	(	City/County	: Lincoln	County Sar	mpling Date: 2024-07-17
Applicant/Owner: Montana Dept. Of Transportation	n			State: Montana San	npling Point: DP01w
Investigator(s): McEldowney		Section, To	wnship, Ra	nge: S13 T27N R30W	
				convex, none): Concave	Slope (%): 0
Subregion (LRR): E 43A	_ Lat: 48.	106878		Long: <u>-115.411242</u>	Datum: NAD 83
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terrace	es-Andic Dystro	ochrepts, glac	ial outwash terr	aces, complex NWI classification	n: PEM1C
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Yes	No_	(If no, explain in Rema	rks.)
Are Vegetation, Soil, or Hydrology si	gnificantly o	disturbed?	Are '	Normal Circumstances" prese	ent? Yes No
Are Vegetation, Soil, or Hydrologyna	aturally prob	olematic?	(If ne	eded, explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map s	showing	samplin	g point l	ocations, transects, im	portant features, etc.
Hydrophytic Vegetation Present? Yes No					
Hydric Soil Present? Yes No	·		ne Sampled nin a Wetlan		No
Wetland Hydrology Present? Yes No	<u> </u>	Witi	iii a vvetiai	165	NO
Remarks:		•-			
PEM, riverine sample point at north e	nd of s	ite.			
VEGETATION – Use scientific names of plant	s.				
Tree Stratum (Plot size: 30 ft r	Absolute % Cover			Dominance Test workshee	
1				Number of Dominant Species That Are OBL, FACW, or FA	
2				Total Number of Dominant	、,
3				Species Across All Strata:	<u>1</u> (B)
4				Percent of Dominant Specie	es
Sapling/Shrub Stratum (Plot size: 15 ft r )		= Total Co	over	That Are OBL, FACW, or FA	
1				Prevalence Index workshe	
2				Total % Cover of:  OBL species 16	$\begin{array}{c} \underline{\text{Multiply by:}} \\ x 1 = \underline{16} \end{array}$
3					x 2 = 150
4					x 3 = 0
5	·			FACU species 0	
Herb Stratum (Plot size: 5 ft r		= Total Co	over	· ·	x 5 = 0
1. Phalaris arundinacea	75	~	FACW		_ (A) <u>166</u> (B)
2. Carex pellita	10		OBL	Prevalence Index = B	/A = 182
3. Carex utriculata	5		OBL	Hydrophytic Vegetation In	
4. Persicaria amphibia	1		OBL	✓ 1 - Rapid Test for Hydro	
5				✓ 2 - Dominance Test is >	
6				✓ 3 - Prevalence Index is	≤3.0 <sup>1</sup>
7				4 - Morphological Adap	
8				data in Remarks or o	•
9				5 - Wetland Non-Vascu	
10				Problematic Hydrophyti  Indicators of hydric soil and	
11	04	T-4-1 O-		be present, unless disturbed	
Woody Vine Stratum (Plot size:)	31 :	= Total Co	ver		
1			-	Hydrophytic	
2				Vegetation	<b>/</b>
0/ Page Cround in Heat Stratum Q		= Total Co	ver	Present? Yes	No
% Bare Ground in Herb Stratum 9  Remarks:					
	.doo o n	a o i tivo	ropid to	at a positivo domin	anaa taat and a
Evidence of hydrophytic vegetation incluprevalence index less than or equal to 3.	=	ositive	ιαριά ιθ	εσι, α μυσιτίνε αυπίπο	ance lest, allu a

SOIL Sampling Point: DP01w

Profile Desc	ription: (Describ	e to the de	pth neede				or confirm	the absence	of indicators.)
Depth	Matrix Color (moist)	%	Color	Redox (moist)	<u>Features</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
(inches) 0 - 16	10YR 2/1	<u>%</u> 100	COIOF	(IIIOISI)	70	i ype	LUC		Sulfidic odor at 8 inches.
<u> </u>	1011(2/1	_ 100							Sumuic odor at o menes.
			· -						
			· -						
-									
_									
¹Type: C=Co	oncentration, D=De	enletion RM	1=Reduced	Matrix CS	=Covered	or Coate	d Sand Gr	ains <sup>2</sup> l o	cation: PL=Pore Lining, M=Matrix.
• •	ndicators: (Appl	•					a Garia Gr		ors for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		San	dy Redox (S	35)	•		2 cr	m Muck (A10)
Histic Ep	pipedon (A2)			ped Matrix	•				Parent Material (TF2)
Black His			✓ Loar	my Mucky M	lineral (F1	) (except	MLRA 1)	Ver	y Shallow Dark Surface (TF12)
_ , ,	n Sulfide (A4)			my Gleyed N		)		Oth	er (Explain in Remarks)
	Below Dark Surfa	ace (A11)		leted Matrix				3, ,, ,	
	ark Surface (A12) lucky Mineral (S1)			ox Dark Sur leted Dark S	` ,	7)			ors of hydrophytic vegetation and and hydrology must be present,
	licky Milleral (31) Bleyed Matrix (S4)			ox Depressi		,			es disturbed or problematic.
	_ayer (if present):			ож <u>Боргооо</u> .	(i)			1	or problematic
Type:	, , ,								
Depth (inc	ches):							Hydric Soil	Present? Yes V No No
Remarks:	, <u> </u>							,	
Mucky m	nineral soil v	with a s	ulfidic	odor.					
HYDROLO	GY								
Wetland Hyd	drology Indicators	s:							
Primary India	cators (minimum of	one require	ed; check a	all that apply	/)			Seco	ndary Indicators (2 or more required)
Surface	Water (A1)			Water-Stai	ned Leave	es (B9) ( <b>e</b> :	xcept	V	Vater-Stained Leaves (B9) (MLRA 1, 2,
High Wa	iter Table (A2)			MLRA 1	I, 2, 4A, a	nd 4B)			4A, and 4B)
✓ Saturation	on (A3)			Salt Crust	(B11)				Prainage Patterns (B10)
	arks (B1)			Aquatic Inv				[	Ory-Season Water Table (C2)
	nt Deposits (B2)			Hydrogen (		. ,		_	Saturation Visible on Aerial Imagery (C9)
	oosits (B3)					_	-		Geomorphic Position (D2)
	it or Crust (B4)			Presence of					Shallow Aquitard (D3)
	osits (B5)			Recent Iro					AC-Neutral Test (D5)
	Soil Cracks (B6)			Stunted or			1) (LRR A)		Raised Ant Mounds (D6) (LRR A)
	on Vis ble on Aeria			Other (Exp	laın ın Rei	marks)		+	rost-Heave Hummocks (D7)
	Vegetated Conca	ve Surface	(B8)						
Field Observ		Vaa	Na V	Depth (inc	.h \.				
Surface Water							_		
Water Table				Depth (inc					D
Saturation Pr (includes cap		Yes _ •	NO	_ Depth (inc	nes): <u>U</u>		_ wetia	ana Hyarolog	y Present? Yes No
	corded Data (strea	m gauge, m	nonitoring v	well, aerial p	hotos, pre	evious ins	pections),	if available:	
Remarks:									
Data poi	nt had satu	ration t	o the s	oil surf	ace ar	nd a su	ulfidic	odor.	

Project/Site: Schrieber Lake	(	City/County:	Lincoln (	Sampling Date: 2024-07-17	
Applicant/Owner: Montana Dept. of Transportation	n		Sampling Point: DP02u		
Investigator(s): E Reynaud		Section, To	wnship, Rar	nge: S13 T27N R30W	
					Slope (%): 0
Subregion (LRR): E 43A	_ Lat: 48.	105782		Long: -115.413755	Datum: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly	drained			NWI classifica	ation: Not mapped
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes			
Are Vegetation, Soil, or Hydrologys	ignificantly of	disturbed?	Are "	Normal Circumstances" pi	resent? Yes No
Are Vegetation, Soil, or Hydrologyn				eded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing	sampling	g point k	ocations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes No					
Hydric Soil Present? Yes No	o		e Sampled in a Wetlan		No 🗸
Wetland Hydrology Present? Yes No	o <u> </u>	WILLI	II a vvetiali	iu: les	
Remarks:				_	
Upland sample point located 30 ft up	ogradiei	nt of we	etland p	point.	
VEGETATION – Use scientific names of plant	ts.				
Tree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species 2		Dominance Test works	sheet:
1				Number of Dominant Sp That Are OBL, FACW, o	
2.					
3.				Total Number of Domina Species Across All Strat	_
4				Percent of Dominant Sp	acias
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total Co	ver	That Are OBL, FACW, o	
1				Prevalence Index work	sheet:
2.					Multiply by:
3.					x 1 = 0
4.				-	x 2 = 0
5				FAC species 30 FACU species 0	x 3 = 90 x 4 = 0
		= Total Co	ver	UPL species 70	
Herb Stratum (Plot size: 5 ft r )  1. Bromus inermis	70	~	UPL	· ·	(A) 440 (B)
2 Alopecurus arundinaceus	20	<u> </u>	FAC		
3 Elymus repens	10		FAC	Prevalence Index  Hydrophytic Vegetatio	
4.				1 - Rapid Test for H	
5.				2 - Dominance Test	
6				3 - Prevalence Inde	
7				4 - Morphological A	daptations <sup>1</sup> (Provide supporting
8					or on a separate sheet)
9				5 - Wetland Non-Va	hytic Vegetation <sup>1</sup> (Explain)
10					and wetland hydrology must
11.	100	= Total Cov		be present, unless distu	rbed or problematic.
Woody Vine Stratum (Plot size:)	100	= Total Cov	еі		
1				Hydrophytic	
2				Vegetation	No_ 🗸
% Bare Ground in Herb Stratum 0	:	= Total Cov	er	riesentr fes	NU
Remarks:					
Data point did not meet any hydroph	ytic ve	getatio	n indica	ators.	
	·				

SOIL Sampling Point: DP02u

Profile Desc	ription: (Describ	e to the dep	th neede				confirm	the absence	of indicato	rs.)	
Depth	Matrix Color (moist)	%	Color		Features	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Domorko	
(inches) 0 - 16	10YR 2/1	100	<u> </u>	(moist)	%	<u>rype</u>		Silt Loam		Remarks	
0-10	101K 2/1	_ 100						SIIL LUAIII			
-											
-											
_											
		<u> </u>					<del></del> -				
	-										
1 0 0								. 21			
	ncentration, D=Dendicators: (Appli						Sand Gra			Pore Lining, Macenic Hydr	
Histosol		icable to all		dy Redox (S		:u. <i>)</i>			n Muck (A10	-	ic dolls .
	oipedon (A2)			ped Matrix					Parent Mat	*	
Black Hi				•	. ,	) (except M	LRA 1)			ark Surface (T	F12)
Hydroge	n Sulfide (A4)			ny Gleyed N			,		er (Explain i		,
	l Below Dark Surfa	ice (A11)		leted Matrix							
	ark Surface (A12)			ox Dark Sur	, ,					hytic vegetati	
	lucky Mineral (S1)			leted Dark S ox Depressi		7)				y must be pre or problemation	
	leyed Matrix (S4)  ayer (if present):		Reu	ox Deplessi	UIIS (FO)			unies	s disturbed	or probleman	<i>j.</i>
Type:	-ayo. ( p. 000).										
, <u> </u>	ches):							Hydric Soil	Present?	Yes	No 🗸
Remarks:								,			
No hydri	c soil indica	itors ob	serve	d.							
HYDROLO	CA										
•	drology Indicators ators (minimum of		di abaali a	all that annly	۸			Casas	adom i Indiao	toro (2 or mor	o roquirod)
-	Water (A1)	one require	u, check a			o (P0) (ava-	nnt.		•	tors (2 or mor	
·	ter Table (A2)				, 2, 4A, a	es (B9) (exce	epı	v	4A, and 4	d Leaves (B9)	(IVILKA 1, 2,
Saturation				Salt Crust (		11G 4D)		П	rainage Pat	•	
·	arks (B1)			Aquatic Inv	,	s (B13)			_	Vater Table (0	32)
	it Deposits (B2)			Hydrogen S					-		I Imagery (C9)
	oosits (B3)						ing Roots	s (C3) G			0 , ( ,
	t or Crust (B4)			Presence of		_			hallow Aqui		
Iron Dep	osits (B5)			Recent Iron	Reduction	on in Tilled S	oils (C6)	F	AC-Neutral	Test (D5)	
Surface	Soil Cracks (B6)			Stunted or	Stressed	Plants (D1)	(LRR A)	R	aised Ant M	lounds (D6) ( <b>L</b>	_RR A)
Inundation	on Vis ble on Aeria	l Imagery (B	7)	Other (Exp	lain in Rei	marks)		F	rost-Heave	Hummocks (D	07)
	Vegetated Conca	ve Surface (	B8)								
Field Observ											
Surface Water		Yes									
Water Table		Yes	_								.,
Saturation Pr		Yes	No	Depth (inc	hes):		Wetlai	nd Hydrolog	y Present?	Yes	_ No
(includes cap Describe Red	corded Data (strea	m gauge, mo	onitoring v	well, aerial p	hotos, pre	evious inspe	ctions), if	available:			
Remarks:											
No ovide	noo of wot	and by	drolog	v oboor	vod.						
NO EVIGE	ence of wetl	and my	ai olog	y obser	veu.						

Project/Site: Schrieber Lake	Cit	ty/County	Lincoln (	County	Sampling Date:	2024-07-17
Applicant/Owner: Montana Dept. of Transportatio				State: Montana		
Investigator(s): R Baumgarten	Se	ection, To	wnship, Rai	nge: S13 T27N R30W	<i>I</i>	
Landform (hillslope, terrace, etc.): Terrace/floodplain						oe (%): 1
Subregion (LRR): E 43A	Lat: 48.10	05695		Long: -115.413715	Datur	n: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly						
Are climatic / hydrologic conditions on the site typical for this	s time of year'	? Yes	✓ No_	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrologys	significantly dis	sturbed?	Are "	Normal Circumstances" p	resent? Yes	, No
Are Vegetation, Soil, or Hydrology r				eded, explain any answei		
SUMMARY OF FINDINGS – Attach site map						atures, etc.
Hydrophytic Vegetation Present? Yes N	lo					
	lo	I	e Sampled	Area 🗸	N	
	lo	with	in a Wetlar	id? Yes	No	
Remarks:						
Wetland data point in NW area of site	e.					
VEGETATION – Use scientific names of plan	ıts.					
Tree Stratum (Plot size: 30 ft r	Absolute I % Cover S			Dominance Test work		
1				Number of Dominant Sp That Are OBL, FACW, of		(A)
2.						( )
3				Total Number of Domina Species Across All Stra		(B)
4				Percent of Dominant Sp	pecies	
Sapling/Shrub Stratum (Plot size: 15 ft r )	=	Total Co	ver	That Are OBL, FACW, of		(A/B)
1				Prevalence Index worl	ksheet:	
2.				Total % Cover of:		<u> by:</u>
3.				OBL species 11 80	x 1 = 11	
4					$x = \frac{100}{0}$	
5					x 4 = 0	<del></del>
Herb Stratum (Plot size: 5 ft r )	=	Total Co	ver		x 5 = 0	
1. Phalaris arundinacea	80	<b>/</b>	FACW		(A) 171	(B)
2. Carex pellita	10		OBL	Prevalence Index		
3. Persicaria amphibia	1		OBL	Hydrophytic Vegetation		
4				✓ 1 - Rapid Test for H		ation
5				✓ 2 - Dominance Tes	t is >50%	
6				✓ 3 - Prevalence Inde		
7				4 - Morphological A	Adaptations <sup>1</sup> (Provies or on a separate	de supporting
8				5 - Wetland Non-Va	•	Sileet)
9 10				Problematic Hydrop		(Explain)
11.				<sup>1</sup> Indicators of hydric soil	l and wetland hydro	ology must
	0.4	Total Cov	ver	be present, unless distu	irbed or problemat	ic.
Woody Vine Stratum (Plot size:)						
1				Hydrophytic		
2				Vegetation Present? Yes	s No	
	=					
Remarks:						
Evidence of hydrophytic vegetation incl	ludes a po	ositive	rapid te	st, a positive don	ninance test,	and a
prevalence index less than or equal to 3	3.0.					

SOIL Sampling Point: DP02w

Profile Desc	ription: (Describe	to the de	oth needed to docur	ment the	indicator	or confirm	the absend	ce of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 17	10YR 2/1	100					Loam	Organic matter.
17 - 20	10YR 5/1	98	10YR 5/6	2	С	PL	Silt Loan	n Depleted matrix likely continues below 20 inches.
-								
							-	
					-			
								_
-								
¹Type: C=Co	oncentration D=De	oletion RM	=Reduced Matrix, CS	S=Covere	d or Coate	ed Sand Gr	ains <sup>2</sup> I	Location: PL=Pore Lining, M=Matrix.
			LRRs, unless othe			ou ourid Or		ators for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy Redox (		,			cm Muck (A10)
	pipedon (A2)		Stripped Matrix					ed Parent Material (TF2)
Black His			Loamy Mucky N		1) (excep	t MLRA 1)		ery Shallow Dark Surface (TF12)
Hydroge	n Sulfide (A4)		Loamy Gleyed			,	·	other (Explain in Remarks)
	d Below Dark Surfac	ce (A11)	Depleted Matrix	k (F3)				
	ark Surface (A12)		Redox Dark Su	` '				ators of hydrophytic vegetation and
-	lucky Mineral (S1)		Depleted Dark		=7)			tland hydrology must be present,
	leyed Matrix (S4)  ayer (if present):		Redox Depress	sions (F8)			uni	less disturbed or problematic.
	-ayer (ii present).							
Type:	-h \.						Herdela C	oil Present? Yes No
Depth (inc	cnes):						Hydric So	oil Present? Yes No
HYDROLO	GY							
Wetland Hyd	drology Indicators	;						
Primary Indic	cators (minimum of	one require	ed; check all that appl	y)			Sec	condary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ined Leav	es (B9) (e	except		Water-Stained Leaves (B9) (MLRA 1, 2,
	iter Table (A2)		<del></del>	1, 2, 4A,	. , ,	•		4A, and 4B)
Saturatio	on (A3)		Salt Crust	(B11)				Drainage Patterns (B10)
Water M	arks (B1)		Aquatic In	vertebrate	es (B13)		_	Dry-Season Water Table (C2)
Sedimer	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)		_	Saturation Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)		Oxidized F	Rhizosphe	res along	Living Roo	ts (C3) 🔽	Geomorphic Position (D2)
Algal Ma	t or Crust (B4)		Presence	of Reduce	ed Iron (C	4)		Shallow Aquitard (D3)
Iron Dep	osits (B5)					d Soils (C6		FAC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted or	Stressed	l Plants (D	1) ( <b>LRR A</b> )		Raised Ant Mounds (D6) (LRR A)
Inundation	on Vis ble on Aerial	Imagery (E	37) Other (Exp	olain in Re	emarks)		_	Frost-Heave Hummocks (D7)
Sparsely	Vegetated Concav	e Surface	(B8)					
Field Observ			,					
Surface Water			No Depth (in					
Water Table			No Depth (in					
Saturation Pr	oillary fringe)		No Depth (in					ogy Present? Yes V No No
pesonne ke	Joinen Dala (Silean	ı yauye, M	onitoring well, aerial	ριισισό, βί	evious ins	ppeclio(18),	ıı avallable:	
Remarks:								
	aiat but nat	auita -	oturated Thi	0 0 2 0 0	wee !	المايد م	turoto -	Loorlier in the growing
		•				-		I earlier in the growing
season.	Secondary i	ndicato	ors provide e	videnc	e of w	etland/	nydrolo	ogy.

Project/Site: Schrieber Lake	(	City/Coun	<sub>ity:</sub> Lincoln (	County Sampling Date: 2024-07-17
Applicant/Owner: Montana Dept. of Transporta				State: Montana Sampling Point: DP03u
		Section, 7	Γownship, Rar	nge: S13 T27N R30W
Landform (hillslope, terrace, etc.): Shoulder				
• • • • • • • • • • • • • • • • • • • •			•	Long: -115.414452 Datum: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poo				
Are climatic / hydrologic conditions on the site typical for				
	-			
				Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally pro	blematic?	' (If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	ap showing	sampli	ng point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No		tha Cammiad	A
Hydric Soil Present? Yes	No		the Sampled thin a Wetlan	
Wetland Hydrology Present? Yes	No	•	tilli a Wetlan	NO
Remarks:		_	_	
Upland data point on edge of fores	st with FA	C veg	etation.	
VEGETATION – Use scientific names of p	lants.			
20 ft r	Absolute		nt Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r )			? Status	Number of Dominant Species
1. Pinus contorta	15		FAC	That Are OBL, FACW, or FAC: 4 (A)
2. Picea glauca 3. Amelanchier alnifolia	<u>10</u>		FAC FACU	Total Number of Dominant
3. Americancine anniona			_ FACU	Species Across All Strata: 6 (B)
4	30	= Total C	Cover	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft r )		- Total C	JOV <del>C</del> I	That Are OBL, FACW, or FAC: 66.66 (A/B)
1. Arctostaphylos uva-ursi	10		FACU	Prevalence Index worksheet:
2. Symphoricarpos albus	10		FACU	Total % Cover of: Multiply by:
3. Amelanchier alnifolia	5		FACU	OBL species $0$ $x 1 = 0$ FACW species $1$ $x 2 = 2$
4. Crataegus douglasii	1		FAC	FAC species 101 x 3 = 303
5. Picea glauca	1		FAC	FACU species 40 x 4 = 160
Harb Chrotism (Distains, 5 ft r	27	= Total C	Cover	UPL species 0 x 5 = 0
Herb Stratum (Plot size: 5 ft r  1. Elymus repens	50		FAC	Column Totals: 142 (A) 465 (B)
2. Phleum pratense	20		FAC	
3. Dactylis glomerata	10		FACU	Prevalence Index = B/A = 3.27
4 Agrostis capillaris	$\frac{1}{2}$		FAC	Hydrophytic Vegetation Indicators:
5. Equisetum arvense	<u>1</u>		FAC	1 - Rapid Test for Hydrophytic Vegetation  ✓ 2 - Dominance Test is >50%
6. Maianthemum stellatum			FAC	3 - Prevalence Index is ≤3.0 <sup>1</sup>
7 Phalaris arundinacea	1		FACW	4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8.				data in Remarks or on a separate sheet)
9.				5 - Wetland Non-Vascular Plants <sup>1</sup>
10.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
11.			_	<sup>1</sup> Indicators of hydric soil and wetland hydrology must
	~=	= Total C	over	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present? Yes No
% Bare Ground in Herb Stratum 15	-	= Total C	over	
Remarks:				1
Dominance test passed with FACU spec	ies and FA	C spec	ies that a	re ubiquitous in unland areas in the
site and so are poor wetland indicators.	/ \	- 2P00	uiat ai	a.s.quitous iii apiaria aroas iii aro

SOIL Sampling Point: DP03u

Depth	Matrix		Redox Features	0	
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type <sup>1</sup> Lo	oc <sup>2</sup> Texture	Remarks
0 - 15	10YR 4/1	100		Loamy Sand	Gravelly
-					
_					
					-
-					
			<del></del>		
1		<del></del> -			
			Reduced Matrix, CS=Covered or Coated Sa		cation: PL=Pore Lining, M=Matrix.
•		cable to all L	RRs, unless otherwise noted.)		ors for Problematic Hydric Soils <sup>3</sup> :
Histosol (		-	Sandy Redox (S5)		m Muck (A10)
Histic Epi Black His	pedon (A2)	-	Stripped Matrix (S6)		l Parent Material (TF2) y Shallow Dark Surface (TF12)
	n Sulfide (A4)	-	<ul><li>Loamy Mucky Mineral (F1) (except ML</li><li>Loamy Gleyed Matrix (F2)</li></ul>		er (Explain in Remarks)
	Below Dark Surfa	ce (A11)	Depleted Matrix (F3)	Our	er (Explain in Remarks)
	rk Surface (A12)	( ' ' ' )	Redox Dark Surface (F6)	<sup>3</sup> Indicate	ors of hydrophytic vegetation and
<del></del>	ucky Mineral (S1)	•	Depleted Dark Surface (F7)		and hydrology must be present,
-	eyed Matrix (S4)	-	Redox Depressions (F8)		ss disturbed or problematic.
Restrictive L	ayer (if present):				
Type:					
Depth (inc	hes):			Hydric Soil	Present? Yes No
Gravel th		rofile. N	o hydric soil indicators obs	erved.	
Gravel th			o hydric soil indicators obs	erved.	
IYDROLOO	SY rology Indicators	:	o hydric soil indicators obs		ndary Indicators (2 or more required)
Gravel th  HYDROLOG  Wetland Hyd  Primary Indica	SY rology Indicators	:	,	Seco	ndary Indicators (2 or more required) Vater-Stained Leaves (B9) ( <b>MLRA 1, 2</b> ,
Gravel th  IYDROLOG  Wetland Hyd  Primary Indicat  Surface N	GY rology Indicators ators (minimum of	:	; check all that apply)	Seco	
Gravel th  IYDROLOG  Wetland Hyd  Primary Indicate  Surface V  High Wat	rology Indicators ators (minimum of Vater (A1) er Table (A2)	:	; check all that apply) Water-Stained Leaves (B9) ( <b>exce</b>	Seco	Vater-Stained Leaves (B9) (MLRA 1, 2,
Gravel th  IYDROLOG  Wetland Hyd  Primary Indicate  Surface V  High Wat	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3)	:	; check all that apply)  Water-Stained Leaves (B9) (exception of the context	Seco V [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
IYDROLOG Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3)	:	; check all that apply)  Water-Stained Leaves (B9) (exception of the content	<u>Seco</u> <b></b> V C C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10)
IYDROLOG Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2)	:	; check all that apply)  Water-Stained Leaves (B9) (exception of the content	Seco Dt V C C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9
Stravel th  HYDROLOG  Wetland Hyd  Primary Indica  Surface V  High Wat  Saturatio  Water Ma  Sediment  Drift Depri	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2)	:	check all that apply)  Water-Stained Leaves (B9) (exception of the content of the	Seco  ot V [ [ 5] ag Roots (C3) C	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9
Stravel th  HYDROLOG  Wetland Hyd  Primary Indica  Surface V  High Wat  Saturatio  Water Ma  Sediment  Drift Depri	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4)	:	; check all that apply)  Water-Stained Leaves (B9) (exception of the content	Seco  pt V [ [ S S S g Roots (C3) S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Saturatio Water Ma Sediment Drift Depo	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4)	:	check all that apply)  Water-Stained Leaves (B9) (exception of the content of the	Seco  Dt V C C S ag Roots (C3) C S ils (C6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3)
Saturatio Water Ma Sediment Drift Depo Algal Mat Surface Surfa	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) e or Crust (B4) posits (B5)	: one required	check all that apply)  Water-Stained Leaves (B9) (exception of the proof of the pro	Seco V E E S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Seomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Stravel the Stravel the Stravel Hydrology  Wetland Hydrology  Primary Indicators  Surface Volume High Water Maren	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) or Crust (B4) osits (B5) Soil Cracks (B6)	: one required	Check all that apply)  Water-Stained Leaves (B9) (exception of the property of	Seco V E E S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Stravel the Stravel the Stravel Hydrology  Wetland Hydrology  Primary Indicators  Surface Volume High Water Maren	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) c or Crust (B4) posits (B5) Goil Cracks (B6) n Vis ble on Aerial Vegetated Concav	: one required	Check all that apply)  Water-Stained Leaves (B9) (exception of the property of	Seco V E E S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Sediment Dirift Depo Algal Mate Surface Surfac	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) t or Crust (B4) posits (B5) Soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations:	: one required Imagery (B7 ve Surface (B	Check all that apply)  Water-Stained Leaves (B9) (exception of the property of	Seco V E E S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Wetland Hyd Primary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) or Crust (B4) posits (B5) Goil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: r Present?	: one required Imagery (B7 ve Surface (B	Check all that apply)  Water-Stained Leaves (B9) (exception of the property of	Seco V E E S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Field Observ Surface Water Table F	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) or Crust (B4) posits (B5) Soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: r Present?	: one required Imagery (B7 ve Surface (B Yes N	Check all that apply)  Water-Stained Leaves (B9) (exception of the property of	Seco  Dt V  C S  ng Roots (C3) C S  ils (C6) F F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Sravel the  IYDROLOG  Wetland Hyd  Primary Indica  Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely  Field Observ  Surface Water Water Table F  Saturation Pro (includes capi	rology Indicators ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4) posits (B5) Soil Cracks (B6) in Vis ble on Aerial Vegetated Concavations: r Present? Present? esent?	: one required Imagery (B7 ve Surface (B) Yes N Yes N	Check all that apply)  Water-Stained Leaves (B9) (exception of the property of	Seco  Dt V E E S S S S IIS (C6) F F F  Wetland Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Sravel the  IYDROLOG  Wetland Hyd  Primary Indica  Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely  Field Observ  Surface Water Water Table F  Saturation Pro (includes capi	rology Indicators ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4) posits (B5) Soil Cracks (B6) in Vis ble on Aerial Vegetated Concavations: r Present? Present? esent?	: one required Imagery (B7 ve Surface (B) Yes N Yes N	Check all that apply)  Water-Stained Leaves (B9) (exception of the property of	Seco  Dt V E E S S S S IIS (C6) F F F  Wetland Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Sravel the  IYDROLOG  Wetland Hyd  Primary Indica  Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely  Field Observ  Surface Water Water Table F  Saturation Pro (includes capi	rology Indicators ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4) posits (B5) Soil Cracks (B6) in Vis ble on Aerial Vegetated Concavations: r Present? Present? esent?	: one required Imagery (B7 ve Surface (B) Yes N Yes N	Check all that apply)  Water-Stained Leaves (B9) (exception of the property of	Seco  Dt V E E S S S S IIS (C6) F F F  Wetland Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Sravel the  IYDROLOG  Wetland Hyd  Primary Indica  Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely  Field Observ  Surface Water Water Table F  Saturation Pro (includes capi	rology Indicators ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4) posits (B5) Soil Cracks (B6) in Vis ble on Aerial Vegetated Concavations: r Present? Present? esent?	: one required Imagery (B7 ve Surface (B) Yes N Yes N	Check all that apply)  Water-Stained Leaves (B9) (exception of the property of	Seco  Dt V E E S S S S IIS (C6) F F F  Wetland Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Field Observ Surface Water Table F Saturation Precinctudes capides Remarks:	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) for Crust (B4) posits (B5) Soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: r Present? esent? esent? ellary fringe) orded Data (strear	: one required Imagery (B7 ve Surface (B) Yes N Yes N Yes N In gauge, mod	Check all that apply)  Water-Stained Leaves (B9) (exception of MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livin  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled So  Stunted or Stressed Plants (D1) (L)  Other (Explain in Remarks)  Output  Depth (inches):  Depth (inches):  Depth (inches):  Depth (inches):	Seco  Dt V E E S S S S IIS (C6) F F F  Wetland Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Field Observ Surface Water Table F Saturation Precinctudes capides Remarks:	rology Indicators ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) t Deposits (B2) posits (B3) for Crust (B4) posits (B5) Soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: r Present? esent? esent? ellary fringe) orded Data (strear	: one required Imagery (B7 ve Surface (B) Yes N Yes N Yes N In gauge, mod	Check all that apply)  Water-Stained Leaves (B9) (exception of the property of	Seco  Dt V E E S S S S IIS (C6) F F F  Wetland Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Field Observ Surface Water Table F Saturation Precinctudes capides Remarks:	rology Indicators ators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) it Deposits (B2) posits (B3) it or Crust (B4) posits (B5) Soil Cracks (B6) in Vis ble on Aerial Vegetated Concavations: r Present? esent? esent? ellary fringe) orded Data (strear	: one required Imagery (B7 ve Surface (B) Yes N Yes N Yes N n gauge, mod	Check all that apply)  Water-Stained Leaves (B9) (exception of MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livin  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled So  Stunted or Stressed Plants (D1) (L)  Other (Explain in Remarks)  Output  Depth (inches):  Depth (inches):  Depth (inches):  Depth (inches):	Seco V E S S S S S S S S S S S S S S S S F F Wetland Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)

Project/Site: Schrieber Lake		City/County	Lincoln	County Sampling Date: 2024-07-17
Applicant/Owner: Montana Dept. of Transportation				State: Montana Sampling Point: DP03w
Investigator(s): E Reynaud	Ç	Section, To	wnship, Ra	nge: S13 T27N R30W
Landform (hillslope, terrace, etc.): Lake Plain				
Subregion (LRR): E 43A	Lat: 48.	104155	`	Long: -115.414286 Datum: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly				NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Yes		
Are Vegetation, Soil, or Hydrology si	gnificantly o	disturbed?	Are "	'Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology na				eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	showing	samplin	g point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No	·			
			e Sampled in a Wetlar	
Wetland Hydrology Present? Yes No Remarks:		With	III a Wellai	103 100 100
	:	_		
Data point taken near western borde	r or site	<del></del>		
VEGETATION – Use scientific names of plant				
Tree Stratum (Plot size: 30 ft r	Absolute % Cover			Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft r )		= Total Co	ver	That Are OBL, FACW, or FAC: 100.00 (A/B)
1				Prevalence Index worksheet:  Total % Cover of: Multiply by:
2				OBL species 50 x 1 = 50
3				FACW species $40$ $x = 80$
4				FAC species 10
5				FACU species 0 x 4 = 0
Herb Stratum (Plot size: 5 ft r		= Total Co	ver	UPL species $0 \times 5 = 0$
1. Phalaris arundinacea	40	~	FACW	Column Totals: <u>100</u> (A) <u>160</u> (B)
2. Carex lasiocarpa	30		OBL	Prevalence Index = B/A = 1.60
3. Carex spp.	10		FAC	Hydrophytic Vegetation Indicators:
4. Eleocharis palustris	10		OBL	✓ 1 - Rapid Test for Hydrophytic Vegetation
5. Persicaria amphibia	10		OBL	✓ 2 - Dominance Test is >50%
6				✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
8				5 - Wetland Non-Vascular Plants <sup>1</sup>
9 10				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
11.				Indicators of hydric soil and wetland hydrology must
	100	= Total Cov	/er	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation Present?  Yes No
% Bare Ground in Herb Stratum 0		- 10ta1C0\	/CI	
Remarks:				
Evidence of hydrophytic vegetation inclu	udes a p	ositive	rapid te	est, a positive dominance test, and a
prevalence index less than or equal to 3.	.0.			•

SOIL

Sampling Point: DP03w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Profile Desc	cription: (Describe	e to the dep	th needed to docu	ment the i	ndicator	or confirn	n the absen	ce of indica	itors.)	
Depth	Matrix			x Feature						
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0 - 12	10YR 2/2	100					Peat			
12 - 18	10YR 6/1	100					Loamy San	d		
-										
-										
	-									
								_		
	-									
	-									
								_		
			=Reduced Matrix, C			d Sand G			_=Pore Lining, M=	
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless othe	rwise not	ed.)		Indica	tors for Pro	oblematic Hydric	: Soils³:
Histosol	` '		Sandy Redox (					cm Muck (A	•	
	pipedon (A2)		Stripped Matrix	, ,	1) (2) 22 2 2 4	MI DA 4\			laterial (TF2) Dark Surface (TF	-10)
_	istic (A3) en Sulfide (A4)		Loamy Mucky Loamy Gleyed			WILKA 1)		•	n in Remarks)	12)
	d Below Dark Surfa	ce (A11)	Depleted Matri		.,		_ ~	trici (Explain	i iii remano,	
	ark Surface (A12)	,	Redox Dark Su				<sup>3</sup> Indica	ators of hydr	ophytic vegetatio	n and
	Mucky Mineral (S1)		Depleted Dark	Surface (F	7)			-	ogy must be pres	
	Gleyed Matrix (S4)		Redox Depres	sions (F8)			unl	ess disturbe	ed or problematic.	
	Layer (if present):									
Type:			<del></del>				l a			
	ches):						Hydric So	oil Present?	Yes	No
Remarks:										
The pres	sence of a h	istic epi	pedon and s	ulfidic	odor i	n the p	orofile ir	ndicates	the prese	nce of
hydric s	oils.									
HYDROLO										
Wetland Hy	drology Indicators	s:								
	•	one required	d; check all that app	•			<u>Sec</u>		cators (2 or more	
	Water (A1)			ined Leav		xcept	_		ned Leaves (B9)	(MLRA 1, 2,
_	ater Table (A2)			1, 2, 4A, a	and 4B)			4A, and		
<u>✓</u> Saturati	, ,		Salt Crust	` '	- (D40)		Drainage Patterns (B10)			
	Marks (B1) nt Deposits (B2)			vertebrate Sulfide O				-	n Water Table (C Visible on Aerial	
	posits (B3)			Rhizosphe		Living Dod	otc (C3)		ic Position (D2)	magery (C9)
	at or Crust (B4)			of Reduce	_	-	Jis (C3)	Shallow Ac		
	posits (B5)			n Reducti			6) <del>/</del>		al Test (D5)	
-	Soil Cracks (B6)			r Stressed					: Mounds (D6) ( <b>L</b> l	RR A)
	ion Vis ble on Aeria	Imagery (B				, ,	-		e Hummocks (D7	•
Sparsel	y Vegetated Conca	ve Surface (	B8)							
Field Obser	vations:									
Surface Wat	ter Present?	Yes	No Depth (ir	iches):						
Water Table	Present?	Yes 🔽	No Depth (ir	iches): 9						
Saturation P	resent?	Yes 🔽	No Depth (ir	iches): 0		Wetl	and Hydrolo	ogy Present	t? Yes <u> </u>	No
	pillary fringe)	m aquaq ma	onitoring well, aerial	nhoton nr	ovious ins	nootions)	if available:			
Describe Re	ecorded Data (streat	n gauge, mo	onitoring well, aerial	priotos, pr	evious iris	pections),	ii available.			
Remarks:										
								_		_
Evidenc	e of wetland	l hydrol	ogy includes	a high	n wate	r table	, soil sa	turatior	ı, sulfidic o	dor,
geomori	phic position	n, and a	positive FAC	C-Neut	ral tes	it.				
-	•	-	-							

Project/Site: Schrieber Lake	C	city/Count	y: Lincoln (	Lincoln County Sampling Date: 2024-07-17			
Applicant/Owner: Montana Dept. of Transportation	1			State: Montana	Sampling Point: DP04u		
		Section, To	ownship, Ra	nge: S13 T27N R30W	<i> </i>		
Landform (hillslope, terrace, etc.): Backslope							
Subregion (LRR): E 43A							
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly				NWI classific			
Are climatic / hydrologic conditions on the site typical for this		r? Yes					
Are Vegetation, Soil, or Hydrologysi	-						
Are Vegetation, Soil, or Hydrologyna	aturally prob	lematic?	(If ne	eded, explain any answe	rs in Remarks.)		
SUMMARY OF FINDINGS - Attach site map s	showing	samplir	ng point le	ocations, transects	, important features, etc.		
Hydrophytic Vegetation Present? Yes No	)						
Hydric Soil Present? Yes No			he Sampled	Area	No		
Wetland Hydrology Present? Yes No		Witi	hin a Wetlar	id? fes	NO		
Remarks:							
Upland data point taken in wooded a	rea nea	r sout	hern bo	rder of site.			
VEGETATION – Use scientific names of plant	s.						
20 ft r			t Indicator	Dominance Test work	sheet:		
,	% Cover			Number of Dominant Sp			
1. Picea glauca	30 15	<u> </u>	FAC	That Are OBL, FACW, o	or FAC: 2 (A)		
Picea engelmannii     Pseudotsuga menziesii	10		FACU	Total Number of Domin			
4. Larix occidentalis	3		FACU	Species Across All Stra	ta: <u>3</u> (B)		
4. Lanx occidentalis		= Total Co		Percent of Dominant Sp	pecies		
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total Co	ovei	That Are OBL, FACW, o			
1				Prevalence Index work			
2				Total % Cover of:			
3				OBL species 0 FACW species 0	x = 0 $x = 0$ $x = 0$		
4				^-	x 2 = 0 x 3 = 195		
5				1 AC species	x 4 = 192		
LI LOCA (DIA) Eft.		= Total Co	over	· ·	x 5 = 10		
Herb Stratum (Plot size: 5 ft r )  1 Linnaea borealis	30	V	FACU	Column Totals: 115	(A) <u>397</u> (B)		
2. Cornus canadensis	10		FAC		( , ( ,		
3. Equisetum arvense	5		FAC	Prevalence Index			
4 Maianthemum stellatum	5		FAC	Hydrophytic Vegetation			
5 Rosa woodsii	5		FACU	1 - Rapid Test for F			
6. Arnica cordifolia	2		UPL	✓ 2 - Dominance Tes     3 - Prevalence Index			
7.					Adaptations <sup>1</sup> (Provide supporting		
8				data in Remarks	s or on a separate sheet)		
9.				5 - Wetland Non-Va	ascular Plants <sup>1</sup>		
10				Problematic Hydro	phytic Vegetation <sup>1</sup> (Explain)		
11.					I and wetland hydrology must		
	<u>57                                    </u>	= Total Co	over	be present, unless distu	irbed or problematic.		
Woody Vine Stratum (Plot size:)							
1				Hydrophytic			
2				Vegetation Present? Yes	s No		
% Bare Ground in Herb Stratum 43		= Total Co	over		_ <del></del>		
Remarks:				I			
Dominance test passed with FACU species	and FAC	] sneci	es that ar	e uhiquitous in unl	and areas in the site		
and so are poor wetland indicators. Upland		•		•			

SOIL Sampling Point: DP04u

Profile Desc Depth	cription: (Descri Matri			ent the indicator or on the second control of the second control o	confirm the absence of	indicators.)
(inches)	Color (moist)		Color (moist)		oc <sup>2</sup> Texture	Remarks
0 - 8	10YR 3/1	100			Loam	
-						
-						
¹Type: C=C	oncentration. D=[	Depletion RN	M=Reduced Matrix, CS:	=Covered or Coated S	and Grains. <sup>2</sup> Locati	on: PL=Pore Lining, M=Matrix.
• •			II LRRs, unless other			for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Redox (S	5)	2 cm N	fuck (A10)
Histic E	pipedon (A2)		Stripped Matrix (	•		arent Material (TF2)
Black Hi	istic (A3)		Loamy Mucky M	ineral (F1) (except MI	_RA 1) Very S	hallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed M		Other (	Explain in Remarks)
	d Below Dark Sur	, ,	Depleted Matrix		31 11	af hadaahadia aa satati
_	ark Surface (A12) ⁄lucky Mineral (S1		Redox Dark Surf Depleted Dark S	· ,		of hydrophytic vegetation and hydrology must be present,
-	Riucky Mineral (S.) Bleyed Matrix (S4		Depleted Dark S			listurbed or problematic.
	Layer (if present		Redox Depressi	0110 (1 0)	difficos d	notarbed of problematic.
Type:		•				
Depth (in					Hydric Soil Pr	esent? Yes No
Remarks:					,	
HYDROLO Wetland Hy	GY drology Indicato	rs:				
Primary India	cators (minimum o	of one require	ed; check all that apply	)	Seconda	ary Indicators (2 or more required)
	Water (A1)		Water-Stair	ned Leaves (B9) (exce	pt Wate	er-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ater Table (A2)		MLRA 1	, 2, 4A, and 4B)		A, and 4B)
Saturation	` '		Salt Crust (			nage Patterns (B10)
	larks (B1)			ertebrates (B13)		Season Water Table (C2)
	nt Deposits (B2)			Sulfide Odor (C1)		ration Visible on Aerial Imagery (C9)
	posits (B3)			· · · · · · · · · · · · · · · · · · ·	ng Roots (C3) Geo	
	at or Crust (B4)			f Reduced Iron (C4)		llow Aquitard (D3)
	oosits (B5)			Reduction in Tilled So		-Neutral Test (D5)
	Soil Cracks (B6) on Vis ble on Aer	ial Imagary (I		Stressed Plants (D1) (		sed Ant Mounds (D6) ( <b>LRR A</b> ) st-Heave Hummocks (D7)
· · · · · · · · · · · · · · · · · · ·	y Vegetated Cond		, , .	ain in Remarks)	F105	t-neave numinocks (D1)
Field Obser		LATE GUITAGE	(50)			
Surface Wat		Yes	No Depth (inc	hes):		
Water Table			No Pepth (inc			
Saturation P			No Pepth (inc		Wetland Hydrology	resent? Yes No
(includes car	pillary fringe)				, ,	resent: resNU
		am gauge, n	nonitoring well, aerial p	hotos, previous inspec	tions), if available:	
Remarks:						
No evide	ence of we	tland hy	drology obser	ved		
			0.09, 00001			

Project/Site: Schrieber Lake	(	City/County: Lincoln County Sampling Date: 2024-07-1					
Applicant/Owner: Montana Dept. Of Transportation	1	State: Montana Sampling Point: DP04w					
Investigator(s): McEldowney	(	Section, To	wnship, Ra	<sub>nge:</sub> S13 T27N R30V	V		
				-	re Slope (%): 4		
Subregion (LRR): E 43A	Lat: 48.	102554		Long: -115.412725	Datum: NAD 83		
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly				NWI classific			
Are climatic / hydrologic conditions on the site typical for this	time of yea	ır? Yes					
Are Vegetation, Soil, or Hydrology sig	-				present? Yes No		
Are Vegetation, Soil, or Hydrology na	turally prob	olematic?	(If ne	eeded, explain any answe	ers in Remarks.)		
SUMMARY OF FINDINGS - Attach site map s	howing	samplin	g point l	ocations, transects	s, important features, etc.		
Hydrophytic Vegetation Present? Yes <u>✓</u> No							
			e Sampled in a Wetlar		, No		
Wetland Hydrology Present? Yes No		With	ili a vvetiai	iu: res			
Remarks: PEM, adjacent to open water in the southwest portion o	f the site	No bydric	coil indicat	tors observed Wetland	determination based on		
presence of hydrophytic vegetation and wetland hydrol		NO HYGHC	son maicai	ors observed. Wetland	determination based on		
VEGETATION – Use scientific names of plant	S.						
		Dominant		Dominance Test work	(sheet:		
		Species?		Number of Dominant S			
1 2				That Are OBL, FACW,			
3.				Total Number of Domir Species Across All Stra	•		
4.							
		= Total Co	ver	Percent of Dominant S That Are OBL, FACW,			
Sapling/Shrub Stratum (Plot size: 15 ft r )				Prevalence Index wor	ksheet:		
1				Total % Cover of:			
2					x 1 = 2		
3				FACW species 65	x 2 = 130		
5				FAC species 1	x 3 = 3		
		= Total Co	ver	·	x 4 = 0		
Herb Stratum (Plot size: 5 ft r )					x 5 = 10		
1. Phalaris arundinacea	40		FACW	Column Totals: 70	(A) <u>145</u> (B)		
2. Deschampsia caespitosa	20		FACW	Prevalence Index	c = B/A = 2.07		
3. Juncus ensifolius	5		FACW	Hydrophytic Vegetation	on Indicators:		
4. Leucanthum vulgare	2		UPL	✓ 1 - Rapid Test for I	Hydrophytic Vegetation		
5. Unidentified forb	2			✓ 2 - Dominance Test	st is >50%		
6. Carex bebbii	1		OBL	✓ 3 - Prevalence Index			
7. Carex pellita	1		OBL FAC		Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)		
8. Plantago major			FAC	5 - Wetland Non-V	• ,		
9					ophytic Vegetation <sup>1</sup> (Explain)		
10				=	il and wetland hydrology must		
11	72	Total Co		be present, unless distr			
Woody Vine Stratum (Plot size:)	<u>,,, , , , , , , , , , , , , , , , , , </u>	= Total Cov	/ei				
1				Hydrophytic			
2				Vegetation	<b>v</b>		
		= Total Cov	/er	Present? Ye	es No		
% Bare Ground in Herb Stratum 28							
		•. •					
Evidence of hydrophytic vegetation inclu	•	ositive	rapid te	est, a positive dor	ninance test, and a		
prevalence index less than or equal to 3.	0.						

SOIL Sampling Point: DP04w

SUIL								Sampling Point: Dr 04W		
Profile Desc	ription: (Describe	to the depti	n needed to docum	ent the i	ndicator	or confirm	the absence	of indicators.)		
Depth	Matrix		Redox	Features	3					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks		
0 - 2	10YR 3/1	100					Sandy Loam	Gravelly		
2 - 15	10YR 5/2	100	_				Sand	Gravelly coarse sand		
			_							
-										
<del></del>	-									
	-									
¹Type: C=Co	oncentration, D=Der	oletion, RM=I	Reduced Matrix, CS	=Covered	or Coate	d Sand Gr	ains. <sup>2</sup> Loc	cation: PL=Pore Lining, M=Matrix.		
, , , , , , , , , , , , , , , , , , ,			RRs, unless other					ors for Problematic Hydric Soils <sup>3</sup> :		
Histosol	(A1)		Sandy Redox (S	5)			2 cn	n Muck (A10)		
	pipedon (A2)	_	Stripped Matrix					Parent Material (TF2)		
Black Hi	. , ,	_	Loamy Mucky M		) (except	MLRA 1)		y Shallow Dark Surface (TF12)		
Hydroge	n Sulfide (A4)		Loamy Gleyed N			,		er (Explain in Remarks)		
Depleted	d Below Dark Surfac	e (A11)	Depleted Matrix	(F3)						
Thick Da	ark Surface (A12)	_	Redox Dark Sur	face (F6)			<sup>3</sup> Indicato	ors of hydrophytic vegetation and		
Sandy M	lucky Mineral (S1)	_	Depleted Dark S	•	7)		wetla	nd hydrology must be present,		
	Bleyed Matrix (S4)	-	Redox Depressi	ons (F8)			unles	s disturbed or problematic.		
Restrictive I	_ayer (if present):									
Type:										
Depth (inc	ches):						Hydric Soil	Present? Yes No		
Remarks:							1			
hydroph HYDROLO		on and	wetland hyd	rology	<b>'.</b>			_		
	drology Indicators:	ı.								
_			check all that apply	d			Socor	ndary Indicators (2 or more required)		
	•	nie requireu,			(DO) (-					
· <del></del>	Water (A1)		Water-Stair			xcept	V	Vater-Stained Leaves (B9) (MLRA 1, 2,		
_	iter Table (A2)			, 2, 4A, a	nd 4B)		5	4A, and 4B)		
<u>✓</u> Saturation			Salt Crust (		(0.40)		Drainage Patterns (B10)			
· · · · · · · · · · · · · · · · · · ·	arks (B1)		Aquatic Inv					ry-Season Water Table (C2)		
	nt Deposits (B2)		Hydrogen S					aturation Visible on Aerial Imagery (C9)		
	oosits (B3)		Oxidized R		_	-		Geomorphic Position (D2)		
	at or Crust (B4)		Presence of				· · · · · · · · · · · · · · · · · · ·	hallow Aquitard (D3)		
	osits (B5)		Recent Iron					AC-Neutral Test (D5)		
	Soil Cracks (B6)		Stunted or			1) (LRR A		aised Ant Mounds (D6) (LRR A)		
	on Vis ble on Aerial			lain in Re	marks)		F	rost-Heave Hummocks (D7)		
_ ' _ '	Vegetated Concav	e Surface (B	8)							
Field Observ										
Surface Water			o Depth (inc							
Water Table	Present? Y	'es N	o V Depth (inc	hes):						
Saturation Pr	resent? Y	′es _ 🗸 N	o Depth (inc	hes): 0		Wetla	and Hydrolog	y Present? Yes 🖍 No		
(includes cap	oillary fringe)									
Describe Red	corded Data (stream	n gauge, mor	nitoring well, aerial p	hotos, pre	evious ins	pections),	ıt available:			
Remarks:										
Saturate	d to the surf	ace. Su	ırface water	locate	ed 10 f	t to no	rth.			
_ 5. 15.1 5.10										

Project/Site: Schrieber Lake	(	City/County	: Lincoln (	County	Sampling Date: 2024-07-17		
Applicant/Owner: Montana Dept. of Transportation	ion State: Montana Sampling Point: DP05u						
		Section, Township, Range: S13 T27N R30W					
Landform (hillslope, terrace, etc.): Hillslope Terrace				-			
					Datum: NAD 83		
				NWI classific			
Are climatic / hydrologic conditions on the site typical for this	time of ves	ar? Ves	V No	(If no, explain in R	emarks )		
Are Vegetation, Soil, or Hydrologys					present? Yes No		
Are Vegetation, Soil, or Hydrology n	-			eded, explain any answe			
SUMMARY OF FINDINGS – Attach site map					•		
Hydrophytic Vegetation Present? Yes No		-	<del></del>	, 	, ,		
Hydric Soil Present? Yes No	o <u> </u>		ne Sampled		•		
Wetland Hydrology Present? Yes No	o <u> </u>	with	nin a Wetlan	nd? Yes	No		
Remarks:		•					
Upland data point on low terrace adj	acent to	o Schri	eber La	ke.			
VEGETATION – Use scientific names of plant	ts.						
	Absolute	Dominant	Indicator	Dominance Test work	sheet:		
,	% Cover			Number of Dominant Sp			
1. Pseudotsuga menziesii	40		FACU	That Are OBL, FACW, o	or FAC: 2 (A)		
2				Total Number of Domin			
3	·			Species Across All Stra	ta: <u>5</u> (B)		
4	40	= Total Co		Percent of Dominant Sp			
Sapling/Shrub Stratum (Plot size: 15 ft r )		- Total Oc	7701	That Are OBL, FACW, or Prevalence Index work	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
1. Amelanchier alnifolia	10		FACU		Multiply by:		
2. Shepherdia canadensis	<u>5</u>		UPL		x 1 = 0		
3. Lonicera utahensis			FAC		x 2 = 0		
4	. ——			FAC species 78	x 3 = 234		
5	10				x 4 = 204		
Herb Stratum (Plot size: 5 ft r )	16	= Total Co	ver		x 5 = 50		
1. Poa pratensis	50	~	FAC	Column Totals: 139	(A) <u>488</u> (B)		
2. Alopecurus pratensis	25	<b>v</b>	FAC	Prevalence Index	= R/A = 3.51		
3. Centaurea stoebe	5		UPL	Hydrophytic Vegetation			
4. Arnica cordifolia	2		FAC	1 - Rapid Test for H	lydrophytic Vegetation		
5. Campanula rotundifolia	1		FACU	2 - Dominance Tes	t is >50%		
6				3 - Prevalence Inde	ex is ≤3.0 <sup>1</sup>		
7					Adaptations <sup>1</sup> (Provide supporting		
8					s or on a separate sheet)		
9				5 - Wetland Non-Va	phytic Vegetation¹ (Explain)		
10					I and wetland hydrology must		
11	00	- Total Co		be present, unless distu			
Woody Vine Stratum (Plot size:)		= Total Co	ver				
1				Hydrophytic			
2				Vegetation	a Na V		
		= Total Co	ver	Present? Yes	s No		
% Bare Ground in Herb Stratum 17  Remarks:							
No indicators met for hydrophytic ve	getatio	n.					

SOIL Sampling Point: DP05u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			x Feature				_	
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks	
0-9	10YR 3/2	100					Loamy Sand	Lots of rocks and gravel.	
-									
				·					
		<del></del> -					-	-	
-									
		<del>_</del>		-					
17			Dadward Matrix CC		C4-		21 2	sations DI - Dans Lining M-Matrix	
			Reduced Matrix, CS -RRs, unless other			a Sana G		cation: PL=Pore Lining, M=Matrix.  ors for Problematic Hydric Soils <sup>3</sup> :	
_					eu.,			•	
Histosol	oipedon (A2)	-	Sandy Redox (Sandy	•			·	n Muck (A10) Parent Material (TF2)	
Black His		-	Loamy Mucky N		1) (except	MLRA 1)		/ Shallow Dark Surface (TF12)	
	n Sulfide (A4)	-	Loamy Gleyed	•		,	-	er (Explain in Remarks)	
	l Below Dark Surfa	ce (A11)	Depleted Matrix		,				
Thick Da	ark Surface (A12)		Redox Dark Su				<sup>3</sup> Indicato	rs of hydrophytic vegetation and	
	lucky Mineral (S1)	-	Depleted Dark	Surface (F	7)		wetla	nd hydrology must be present,	
	leyed Matrix (S4)	-	Redox Depress	ions (F8)			unles	s disturbed or problematic.	
Restrictive L	ayer (if present):								
Type:								,	
Depth (inc	ches):						Hydric Soil	Present? Yes No	
Remarks:							•		
HYDROLO	GY drology Indicators	::							
_			; check all that appl	v)			Secon	ndary Indicators (2 or more required)	
	Water (A1)	one required	Water-Sta		es (RQ) ( <b>e</b>	vcent		/ater-Stained Leaves (B9) (MLRA 1, 2,	
	ter Table (A2)			1, 2, 4A, a		xcept	v	4A, and 4B)	
Saturation			Salt Crust		and 40)		Г	rainage Patterns (B10)	
Water M	` '		Aquatic In	` '	e (B13)		·	ry-Season Water Table (C2)	
	it Deposits (B2)		Hydrogen					aturation Visible on Aerial Imagery (C9)	
	oosits (B3)					Livina Roc		eeomorphic Position (D2)	
	it or Crust (B4)		Presence	•	_	-		hallow Aquitard (D3)	
	osits (B5)		Recent Iro		•	•		AC-Neutral Test (D5)	
	Soil Cracks (B6)		Stunted or			,		aised Ant Mounds (D6) (LRR A)	
	on Vis ble on Aerial	Imagery (B7				, (		rost-Heave Hummocks (D7)	
	Vegetated Concav				,		<u> </u>	(= , ,	
Field Observ			- /						
Surface Wate	er Present?	Yes N	lo <u> </u>	ches):					
Water Table			lo Depth (in						
Saturation Pr			lo V Depth (in				and Hydrolog	y Present? Yes No	
(includes cap		162 1	io Deptii (iii	CHES)		_   •••••	and Hydrolog	y Fresent: Tes NO	
		m gauge, moi	nitoring well, aerial <sub>l</sub>	photos, pr	evious ins	pections),	if available:		
Remarks:									
No ovida	nce of wot	and hud	rology obso	rved					
INO EVIUE	FILE OF WELL	and nyd	rology obse	ı veu.					

Project/Site: Schrieber Lake		City/County	: Lincoln	County Sampling Date: 2024-07-17
Applicant/Owner: Montana Dept. Of Transportatio		State: Montana Sampling Point: DP05w		
Investigator(s): McEldowney	Ş	Section, To	wnship, Ra	nge: S13 T27N R30W
Landform (hillslope, terrace, etc.): Fringe				
Subregion (LRR): E 43A	Lat: 48.	102488	`	Long: -115.408617 Datum: NAD 83
				NWI classification: PEM1B
Are climatic / hydrologic conditions on the site typical for this				
Are Vegetation, Soil, or Hydrologys				'Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology r	naturally prob	olematic?	(If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	samplin	g point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N	lo			
	lo		ie Sampled in a Wetlar	
Wetland Hydrology Present? Yes N	lo	With	iii a vvetiai	iu: 165 NO
Remarks: Wetland data point in the wetland fringe around Schrie	bor Lako in	the SE po	ertion of the	site. Determination based on the presence of
hydrophytic vegetation and wetland hydrology.	Dei Lake III	the SE po	i don or the	ste. Determination based on the presence of
VEGETATION – Use scientific names of plan	its.			
Tree Stratum (Plot size: 30 ft r	Absolute % Cover			Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2.				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total Co	ver	That Are OBL, FACW, or FAC: 100.00 (A/B)
1				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:  OBL species 25 x 1 = 25
3				OBL species $\frac{25}{36}$ $x = \frac{25}{72}$ FACW species $\frac{25}{36}$ $x = \frac{72}{72}$
4				FAC species 10
5				FACU species 0 x 4 = 0
Herb Stratum (Plot size: 5 ft r )		= Total Co	ver	UPL species 0 x 5 = 0
1. Phalaris arundinacea	35	~	FACW	Column Totals: 71 (A) 127 (B)
2. Typha latifolia	25		OBL	,,,
3 Cirsium arvense	10		FAC	Prevalence Index = B/A = 1.78  Hydrophytic Vegetation Indicators:
4. Mentha arvensis	1		FACW	✓ 1 - Rapid Test for Hydrophytic Vegetation
5.				✓ 2 - Dominance Test is >50%
6				✓ 3 - Prevalence Index is ≤3.0 <sup>1</sup>
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8				data in Remarks or on a separate sheet)
9				5 - Wetland Non-Vascular Plants <sup>1</sup>
10				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
11	74			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	<u>71 :</u>	= Total Cov	ver	1
1				Hydrophytic
2.				Vegetation
	·:			Present? Yes No No
% Bare Ground in Herb Stratum 29  Remarks:				
	ludos s =	o o i timo	ropid +-	not a positivo dominanas tast and -
Evidence of hydrophytic vegetation incl	-	ositive	rapid te	est, a positive dominance test, and a
prevalence index less than or equal to 3	3.0.			

SOIL Sampling Point: DP05w

Profile Desc	ription: (Describe	to the dep	th needed to docun	nent the i	ndicator	or confirm	the absence	of indicators.)		
Depth	Matrix	<u> </u>		x Feature	S			,		
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks		
0 - 2	10YR 2/2	100					Peat			
2 - 15	10YR 3/2	100					Sandy Loam	Gravelly		
-										
-										
	-									
	-									
•			Reduced Matrix, CS			d Sand Gr		cation: PL=Pore Lining, M=Matrix.		
-		cable to all	LRRs, unless other		ed.)			ers for Problematic Hydric Soils <sup>3</sup> :		
Histosol	• •		Sandy Redox (S					n Muck (A10)		
Black Hi	oipedon (A2)		Stripped Matrix Loamy Mucky N	. ,	1) (evcent	MIRA 1)		Parent Material (TF2)  / Shallow Dark Surface (TF12)		
	en Sulfide (A4)		Loamy Gleyed I			WEIKA I)		er (Explain in Remarks)		
	d Below Dark Surfa	ce (A11)	Depleted Matrix	•	,			- ( )		
Thick Da	ark Surface (A12)		Redox Dark Sui	face (F6)				rs of hydrophytic vegetation and		
-	flucky Mineral (S1)		Depleted Dark S		7)			nd hydrology must be present,		
-	Bleyed Matrix (S4)  Layer (if present):		Redox Depress	ions (F8)			unles	s disturbed or problematic.		
	Layer (ii present):									
Type:	ahaa):						Hydric Soil	Present? Yes No		
Remarks:	ches):						Hydric Soil	riesent: ies No		
HYDROLO	GY		sea on the don	шапсе	or riyar	орпунс	vegetation	n and wetland hydrology.		
•	drology Indicators			A			0	adama ka dia atawa (O an manana manaisa di		
		one required	d; check all that apply		(DO) (			ndary Indicators (2 or more required)		
✓ Surface	` ,		Water-Stai			xcept	W	/ater-Stained Leaves (B9) (MLRA 1, 2,		
High wa	ater Table (A2)		MLRA Salt Crust	1, 2, 4A, a	ana 4B)		4A, and 4B)			
	larks (B1)		Aquatic Inv		s (B13)		<ul><li> Drainage Patterns (B10)</li><li> Dry-Season Water Table (C2)</li></ul>			
· <del></del>	nt Deposits (B2)		Hydrogen		. ,		Saturation Visible on Aerial Imagery (C9)			
	posits (B3)		Oxidized R			Living Roo		seomorphic Position (D2)		
	at or Crust (B4)		Presence		_	•	· · —	hallow Aquitard (D3)		
Iron Dep	oosits (B5)		Recent Iro	n Reducti	on in Tilled	d Soils (C6	S) <u>✓</u> F.	AC-Neutral Test (D5)		
Surface	Soil Cracks (B6)		Stunted or	Stressed	Plants (D	1) (LRR A	) R	aised Ant Mounds (D6) (LRR A)		
	on Vis ble on Aerial			lain in Re	marks)		F	rost-Heave Hummocks (D7)		
Field Obser			-,							
Surface Water		Yes ✓ I	No Depth (inc	ches): 3						
Water Table			No Depth (inc							
Saturation P	resent?		No Pepth (inc				and Hydrolog	y Present? Yes No		
(includes cap Describe Re		n gauge, mo	onitoring well, aerial p	hotos, pr	evious ins	pections),	if available:			
Remarks:										
	water locate	ed 6 ft n	orth of data	noint	and ha	is two	secondai	ry indicators.		
Jarrace	water locale	.a 0 1t1	orar or data	Ponit	ana 110	13 1440	Jesoniaai	y maioatoro.		

Project/Site: Schrieber Lake	(	City/County: Lincoln County Sampling Date: 2024-07-17					
Applicant/Owner: Montana Dept. of Transportati			State: Montana Sampling Point: DP06u				
		Section, Township, Range: S13 T27N R30W					
- , ,		Local relief (concave, convex, none): Linear Slope (%): 10					
, ,		8.104847 Long: -115.407074 Datum: NAD 83					
Soil Map Unit Name: 105 - Aquic Udifluvents, poor				NWI classification: Not mapped			
Are climatic / hydrologic conditions on the site typical for t							
	-						
Are Vegetation, Soil, or Hydrology							
Are Vegetation, Soil, or Hydrology  SLIMMARY OF FINDINGS - Attach site mai				eeded, explain any answers in Remarks.) ocations, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes		Jampini	ig point i	obations, transcots, important reatures, etc.			
Hydric Soil Present? Yes		Is th	ne Sampled	I Area			
Wetland Hydrology Present? Yes		with	nin a Wetlar	nd? Yes No			
Remarks:							
Data point taken near eastern bord	er across	s MDT/	IISES h	ooundary			
Data point taken near eastern bord	ei acios.	ן ו שואו כ	001 0 0	odildai y.			
VEGETATION – Use scientific names of pla	nts.						
7 0 ( ) (D) ( ) 30 ft r	Absolute		t Indicator	Dominance Test worksheet:			
Tree Stratum (Plot size: 30 ft r )  1. Pinus ponderosa	<u>% Cover</u> <b>45</b>	Species? ✓	FACU	Number of Dominant Species That Are OBL_FACW_or FAC: 1 (A)			
2. Pseudotsuga menziesii	<u>43</u>		- — —	That Are OBL, FACW, or FAC: 1 (A)			
			1700	Total Number of Dominant Species Across All Strata: 5 (B)			
3			· ——	Species Across All Strata: <u>5</u> (B)			
4	60	= Total Co	over	Percent of Dominant Species			
Sapling/Shrub Stratum (Plot size: 15 ft r		Total Ct	ovei	That Are OBL, FACW, or FAC: 20.00 (A/B)			
1. Amelanchier alnifolia	30		FACU	Prevalence Index worksheet:			
2. Symphoricarpos albus	25		FACU				
3. Prunus virginiana	10		FACU	OBL species $0 \times 1 = 0$ FACW species $0 \times 2 = 0$			
4. Rosa woodsii	5		FACU	FAC species 51 x 3 = 153			
5				FACU species 130 x 4 = 520			
Herb Stratum (Plot size: 5 ft r	70	= Total Co	over	UPL species			
1. Elymus repens	50	~	FAC	Column Totals: 181 (A) 673 (B)			
2. Equisetum arvense			FAC				
3.				Prevalence Index = B/A = 3.71  Hydrophytic Vegetation Indicators:			
4.				1 - Rapid Test for Hydrophytic Vegetation			
5.				2 - Dominance Test is >50%			
6.				3 - Prevalence Index is ≤3.0 <sup>1</sup>			
7				4 - Morphological Adaptations <sup>1</sup> (Provide supporting			
8				data in Remarks or on a separate sheet)			
9				5 - Wetland Non-Vascular Plants <sup>1</sup>			
10.				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
11				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
Manda Vina Chraham (Dlahaira)	51	= Total Co	ver	be present, unless disturbed of problematic.			
Woody Vine Stratum (Plot size:)							
1				Hydrophytic Vegetation			
2		= Total Co		Present? Yes No			
% Bare Ground in Herb Stratum 49		10(a) 00	VCI				
Remarks:							
Site dominated by FACU and FAC spec	cies and o	did not ı	meet an	y hydrophytic vegetation indicators.			

SOIL Sampling Point: DP06u

(inches)	Matrix		Redox Features	<del>-</del>	
	Color (moist)	%	Color (moist) % Type <sup>1</sup> Loc	c <sup>2</sup> Texture	Remarks
0 - 10	10YR 2/1	100		Loam	
<u> </u>					
-					
<u> </u>					
-					
1Typo: C=Cor	acontration D=Do	olotion DM=D	aduced Matrix, CS=Covered or Costed Ser	ad Craina <sup>2</sup> Loop	tion: DI =Doro Lining M=Motrix
			educed Matrix, CS=Covered or Coated Sar RRs, unless otherwise noted.)		tion: PL=Pore Lining, M=Matrix.  s for Problematic Hydric Soils <sup>3</sup> :
Histosol (/		cable to all El	Sandy Redox (S5)		Muck (A10)
	pedon (A2)	_	Stripped Matrix (S6)		Parent Material (TF2)
Black Hist			_ Complet Matrix (30) _ Loamy Mucky Mineral (F1) (except MLR		Shallow Dark Surface (TF12)
	Sulfide (A4)	_	Loamy Gleyed Matrix (F2)		(Explain in Remarks)
	Below Dark Surface	ce (A11)	Depleted Matrix (F3)		• • • • • • • • • • • • • • • • • • • •
	k Surface (A12)	` _	Redox Dark Surface (F6)	<sup>3</sup> Indicators	of hydrophytic vegetation and
Sandy Mu	ucky Mineral (S1)	_	_ Depleted Dark Surface (F7)	wetland	hydrology must be present,
	eyed Matrix (S4)		_ Redox Depressions (F8)	unless	disturbed or problematic.
Restrictive La	ayer (if present):				
Type:			<u> </u>		
Depth (inch	nes):		<u></u>	Hydric Soil P	resent? Yes No 🗡
Remarks:				·	
IYDROLOG	<b>2</b>				
	rology Indicators	<u> </u>			
Wetland Hydr	rology Indicators		check all that apply)	Second	ary Indicators (2 or more required)
Wetland Hydr	rology Indicators ators (minimum of		check all that apply) Water-Stained Leaves (B9) (except		ary Indicators (2 or more required) ter-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydr Primary Indica Surface W	rology Indicators ators (minimum of			t Wa	
Wetland Hydr Primary Indica Surface W High Wate	rology Indicators ators (minimum of a Vater (A1) er Table (A2)		Water-Stained Leaves (B9) (except	Wa	ter-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hydr Primary Indica Surface W High Wate	rology Indicators ators (minimum of e Vater (A1) er Table (A2) n (A3)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Wa Dra	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hydr Primary Indica Surface W High Wate Saturatior Water Ma	rology Indicators ators (minimum of e Vater (A1) er Table (A2) n (A3)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	t Wa Dra Dry	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10)
Wetland Hydr Primary Indica Surface W High Wate Saturatior Water Ma	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2)		<ul> <li>Water-Stained Leaves (B9) (except</li> <li>MLRA 1, 2, 4A, and 4B)</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> </ul>	Wa Dra Dry Sat	ter-Stained Leaves (B9) ( <b>MLRA 1, 2,</b> <b>4A, and 4B)</b> inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9
Wetland Hydr Primary Indica Surface W High Wate Saturatior Water Ma Sediment Drift Depo	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) irks (B1) Deposits (B2)		<ul> <li>Water-Stained Leaves (B9) (except</li> <li>MLRA 1, 2, 4A, and 4B)</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> </ul>	Wa Wa Dra Dry Sat g Roots (C3) Geo	ter-Stained Leaves (B9) ( <b>MLRA 1, 2,</b> <b>4A, and 4B)</b> inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9
Wetland Hydr Primary Indica Surface W High Wate Saturatior Water Ma Sediment Drift Depo	rology Indicators ators (minimum of exter (A1) er Table (A2) en (A3) erks (B1) Deposits (B2) osits (B3) or Crust (B4)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living	Wa Dra Dry Sat g Roots (C3) Gee Sha	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2)
Wetland Hydr Primary Indica Surface W High Wate Saturatior Water Ma Sediment Drift Depo Algal Mat Iron Depo	rology Indicators ators (minimum of exter (A1) er Table (A2) en (A3) erks (B1) Deposits (B2) osits (B3) or Crust (B4)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)	Wa Dra Dry Sat g Roots (C3) Geo Sha s (C6) FAG	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3)
Wetland Hydr Primary Indica Surface W High Wate Saturatior Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	rology Indicators ators (minimum of other (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5)	one required; o	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils	Wa Dra Dry Sat g Roots (C3) Geo Sha s (C6) FA(RR A) Rai	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5)
Wetland Hydr Primary Indica Surface W High Wate Saturatior Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior	rology Indicators ators (minimum of or Vater (A1) er Table (A2) er (A3) erks (B1) Deposits (B2) esits (B3) or Crust (B4) esits (B5) foil Cracks (B6)	one required; o	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR Other (Explain in Remarks)	Wa Dra Dry Sat g Roots (C3) Geo Sha s (C6) FA(RR A) Rai	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Wetland Hydr Primary Indica Surface W High Wate Saturatior Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior	rology Indicators ators (minimum of exter (A1) er Table (A2) er (A3) erks (B1) Deposits (B2) esits (B3) er Crust (B4) esits (B5) foil Cracks (B6) en Vis ble on Aerial Vegetated Concav	one required; o	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LR Other (Explain in Remarks)	Wa Dra Dry Sat g Roots (C3) Geo Sha s (C6) FAG RR A) Rai	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Wetland Hydr Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely	rology Indicators ators (minimum of exter (A1) er Table (A2) er (A3) er (A3) er (B1) Deposits (B2) exits (B3) exits (B3) exits (B5) exits (B5) foil Cracks (B6) exits (B6) exits ble on Aerial Vegetated Concaverations:	one required; of the second se	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks)	Wa Dra Dry Sat g Roots (C3) Geo Sha s (C6) FAG RR A) Rai	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Wetland Hydr Primary Indica Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely V	rology Indicators ators (minimum of or vater (A1) er Table (A2) er (A3) erks (B1) Deposits (B2) esits (B3) er Crust (B4) esits (B5) esit (B5) esit Cracks (B6) en Vis ble on Aerial Vegetated Concaverations: er Present?	Imagery (B7) re Surface (B8	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)      Salt Crust (B11)      Aquatic Invertebrates (B13)      Hydrogen Sulfide Odor (C1)      Oxidized Rhizospheres along Living      Presence of Reduced Iron (C4)      Recent Iron Reduction in Tilled Soils      Stunted or Stressed Plants (D1) (LR      Other (Explain in Remarks)       ▶      Depth (inches):	Wa Dra Dry Sat g Roots (C3) Geo Sha s (C6) FAG RR A) Rai	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Wetland Hydr Primary Indica Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely Water Water Table P	rology Indicators ators (minimum of a Vater (A1) er Table (A2) er (A3) erks (B1) Deposits (B2) esits (B3) er Crust (B4) esits (B5) eoil Cracks (B6) en Vis ble on Aerial Vegetated Concav ations: er Present?	Imagery (B7) re Surface (B8 res No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks))   ✓ Depth (inches): Depth (inches):		ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Wetland Hydr Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely V Field Observa Surface Water Water Table P Saturation Pre (includes capil	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) in (A3) in (B1) Deposits (B2) in (B3) or Crust (B4) in (B5) in Vis ble on Aerial Vegetated Concav ations: in Present?	Imagery (B7) re Surface (B8 res No res No res No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks)  Pepth (inches): Depth (inches):	Wa   Wa   Wa   Wa   Wa   Wa   Wa   Wa	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A)
Wetland Hydr Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Field Observa Surface Water Water Table P Saturation Pre (includes capil	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) in (A3) in (B1) Deposits (B2) in (B3) or Crust (B4) in (B5) in Vis ble on Aerial Vegetated Concav ations: in Present?	Imagery (B7) re Surface (B8 res No res No res No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks))   ✓ Depth (inches): Depth (inches):	Wa   Wa   Wa   Wa   Wa   Wa   Wa   Wa	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Wetland Hydr Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Field Observa Surface Water Water Table P Saturation Pre (includes capil	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) in (A3) in (B1) Deposits (B2) in (B3) or Crust (B4) in (B5) in Vis ble on Aerial Vegetated Concav ations: in Present?	Imagery (B7) re Surface (B8 res No res No res No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks)  Pepth (inches): Depth (inches):	Wa   Wa   Wa   Wa   Wa   Wa   Wa   Wa	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Wetland Hydr Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Field Observa Surface Water Water Table P Saturation Pre (includes capil	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) in (A3) in (B1) Deposits (B2) in (B3) or Crust (B4) in (B5) in Vis ble on Aerial Vegetated Concav ations: in Present?	Imagery (B7) re Surface (B8 res No res No res No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks)  Pepth (inches): Depth (inches):	Wa   Wa   Wa   Wa   Wa   Wa   Wa   Wa	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Wetland Hydr Primary Indica Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely V Field Observa Surface Water Water Table P Saturation Pre (includes capil Describe Reco	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) in (A3) in (A3) in (B1) Deposits (B2) in (B3) or Crust (B4) in (B4) in (B5) in (B6) in (B6) in (B6) in (B6) in (B6) in (B7) in	Imagery (B7) re Surface (B8 res No res No res No res No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils  Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks))   Depth (inches):  Depth (inches):  Depth (inches):	Wa   Wa   Wa   Wa   Wa   Properties   Wa   Wa   Wa   Wa   Wa   Wa   Wa   W	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Wetland Hydr Primary Indica Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely V Field Observa Surface Water Water Table P Saturation Pre (includes capil Describe Reco	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) in (A3) in (A3) in (B1) Deposits (B2) in (B3) or Crust (B4) in (B4) in (B5) in (B6) in (B6) in (B6) in (B6) in (B6) in (B7) in	Imagery (B7) re Surface (B8 res No res No res No res No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks)  Pepth (inches): Depth (inches):	Wa   Wa   Wa   Wa   Wa   Properties   Wa   Wa   Wa   Wa   Wa   Wa   Wa   W	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)
Wetland Hydr Primary Indica Surface W High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely V Field Observa Surface Water Water Table P Saturation Pre (includes capil Describe Reco	rology Indicators ators (minimum of a Vater (A1) er Table (A2) in (A3) in (A3) in (A3) in (B1) Deposits (B2) in (B3) or Crust (B4) in (B4) in (B5) in (B6) in (B6) in (B6) in (B6) in (B6) in (B7) in	Imagery (B7) re Surface (B8 res No res No res No res No	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils  Stunted or Stressed Plants (D1) (LF Other (Explain in Remarks))   Depth (inches):  Depth (inches):  Depth (inches):	Wa   Wa   Wa   Wa   Wa   Properties   Wa   Wa   Wa   Wa   Wa   Wa   Wa   W	ter-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) inage Patterns (B10) -Season Water Table (C2) uration Visible on Aerial Imagery (C9 omorphic Position (D2) allow Aquitard (D3) C-Neutral Test (D5) sed Ant Mounds (D6) (LRR A) st-Heave Hummocks (D7)

Project/Site: Schrieber Lake		City/Count	y: Lincoln (	Lincoln County Sampling Date: 2024-07-17			
Applicant/Owner: Montana Dept. of Transportatio		State: Montana	Sampling Point: DP06w				
Investigator(s): R Baumgarten	ownship, Raı	nge: S13 T27N R30W	!				
Landform (hillslope, terrace, etc.): Footslope		Local relie	ef (concave, o	convex, none): Concave	Slope (%): 2		
Subregion (LRR): E 43A	Lat: 48.	104824		Long: -115.40712	Datum: NAD 83		
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly				NWI classifica			
Are climatic / hydrologic conditions on the site typical for thi	s time of yea	r? Yes _	<b>✓</b> No _	(If no, explain in Re	emarks.)		
Are Vegetation, Soil, or Hydrologys	significantly o	disturbed?	Are "	Normal Circumstances" p	resent? Yes No		
Are Vegetation, Soil, or Hydrology r				eded, explain any answer			
SUMMARY OF FINDINGS – Attach site map	showing	samplir	ng point le	ocations, transects,	important features, etc.		
Hydrophytic Vegetation Present? Yes N	lo						
	lo		he Sampled hin a Wetlan		No		
Wetland Hydrology Present? Yes N Remarks:	10						
	•						
Wetland data point on edge of fores	t near ro	oad.					
VEGETATION – Use scientific names of plan	its.						
Tree Stratum (Plot size: 30 ft r	Absolute % Cover		nt Indicator	Dominance Test works			
1				Number of Dominant Sp That Are OBL, FACW, o			
2.				Total Number of Domina			
3				Species Across All Strat	4		
4				Percent of Dominant Sp	ecies		
Sapling/Shrub Stratum (Plot size: 15 ft r )		= Total C	over	That Are OBL, FACW, o	or FAC: 100.00 (A/B)		
1				Prevalence Index work			
2.				Total % Cover of:			
3				OBL species 0 FACW species 90	x 1 = 0 x 2 = 180		
4					$x = \frac{1}{3} = \frac{1}{3}$		
5					x 4 = 4		
Herb Stratum (Plot size: 5 ft r		= Total C	over		x 5 = 0		
1. Phalaris arundinacea	90	~	FACW	Column Totals: 91	(A) <u>184</u> (B)		
2. Verbascum thapsus	1		FACU	Prevalence Index	= R/A = 2.02		
3				Hydrophytic Vegetatio			
4				✓ 1 - Rapid Test for H	ydrophytic Vegetation		
5				∠ 2 - Dominance Test	is >50%		
6				✓ 3 - Prevalence Inde			
7				4 - Morphological A	daptations <sup>1</sup> (Provide supporting or on a separate sheet)		
8				5 - Wetland Non-Va			
10					phytic Vegetation <sup>1</sup> (Explain)		
11					and wetland hydrology must		
	04	= Total Co		be present, unless distu	rbed or problematic.		
Woody Vine Stratum (Plot size:)							
1				Hydrophytic Vegetation			
2	- <u></u>			Present? Yes	s No		
% Bare Ground in Herb Stratum 9		- TOTAL CC	7v <del>c</del> i				
Remarks:							
Evidence of hydrophytic vegetation incl	ludes a p	ositive	e rapid te	est, a positive dom	ninance test, and a		
prevalence index less than or equal to 3	3.0.						

SOIL Sampling Point: DP06w

Profile Desc	ription: (Describe	to the depth	needed to docu	nent the i	ndicator c	r confirm	the absenc	e of indicators.)
Depth	Matrix			x Feature:				
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0 - 3	10YR 2/1	100					Mucky Peat	Muck, oily with lots of roots.
3 - 8	10YR 2/2	100					Clay Loam	Sulfidic odor.
8 - 16	10YR 2/1	100					Loamy Sand	Very wet and gravelly.
-								
		· <del></del> -		-				
				-				
		·						
		·						
•	oncentration, D=Dep					d Sand Gra		ocation: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all L	RRs, unless othe	rwise note	ed.)		Indica	tors for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)	_	_ Sandy Redox (	S5)			20	cm Muck (A10)
Histic Ep	pipedon (A2)	_	Stripped Matrix					ed Parent Material (TF2)
Black His	` '	_	Loamy Mucky I			MLRA 1)		ery Shallow Dark Surface (TF12)
	n Sulfide (A4)	_	Loamy Gleyed	•	)		Ot	her (Explain in Remarks)
	l Below Dark Surfac	e (A11) _	_ Depleted Matrix				•	
	rk Surface (A12)	_	_ Redox Dark Su	. ,				tors of hydrophytic vegetation and
	lucky Mineral (S1)	_	Depleted Dark		7)			land hydrology must be present,
	leyed Matrix (S4)	_	Redox Depress	sions (F8)			unle	ess disturbed or problematic.
	_ayer (if present):							
Type:			<u>—</u>					:: <b>.</b>
	ches):		<del></del>				Hydric So	il Present? Yes No
Remarks:								
HYDROLO	GY							
	drology Indicators:							
	ators (minimum of o	ne required:	check all that anni	v)			Sac	ondary Indicators (2 or more required)
•		nie requireu,			(DO) /			•
	Water (A1)		Water-Sta		. , ,	cept		Water-Stained Leaves (B9) (MLRA 1, 2,
-	ter Table (A2)			1, 2, 4A, a	ind 4B)			4A, and 4B)
✓ Saturation			Salt Crust	. ,			·	Drainage Patterns (B10)
	arks (B1)		Aquatic In					Dry-Season Water Table (C2)
	t Deposits (B2)		✓ Hydrogen				_	Saturation Visible on Aerial Imagery (C9)
	oosits (B3)		·		res along L	-		Geomorphic Position (D2)
	t or Crust (B4)				d Iron (C4			Shallow Aquitard (D3)
✓ Iron Dep	osits (B5)		Recent Iro			, ,		FAC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted or	Stressed	Plants (D1	) (LRR A)		Raised Ant Mounds (D6) (LRR A)
	on Vis ble on Aerial I			olain in Re	marks)			Frost-Heave Hummocks (D7)
Sparsely	Vegetated Concave	e Surface (B	3)					
Field Observ								
Surface Water			Depth (in			_		
Water Table			Depth (in			_		
Saturation Pr		es N	Depth (in	ches): <u>3</u>		_ Wetla	and Hydrolo	gy Present? Yes No
(includes cap Describe Red	ollary fringe) corded Data (stream	gauge, mon	itoring well, aerial	photos. pr	evious insr	ections) i	f available	
	(	gg.,		, , , , , , , , , , , , , , , , , , ,		, , .		
Remarks:								
Surface	water with in	on dona	eit film iust	Outoio	ام 5f+ r	adius	Multiple	e primary and secondary
	gic indicators	•	osit illili just	outsit	16 JILI	auius.	widitiple	primary and Secondary

Project/Site: Schrieber Lake		City/Co	ounty:	Lincoln	County Sampling Date: 2024-07-17
Applicant/Owner: Montana Dept. Of Transporta	tion				State: Montana Sampling Point: DP07u
Investigator(s): McEldowney		Sectio	n, Tov	vnship, Ra	nge: S13 T27N R30W
Landform (hillslope, terrace, etc.): Hillslope		Local	relief	(concave,	convex, none): Linear Slope (%): 0
Subregion (LRR): E 43A	Lat: 48.	.1064	46		Long: -115.40948 Datum: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poc	orly drained				NWI classification: R5UBH
Are climatic / hydrologic conditions on the site typical for	this time of year	ar? Ye	es	No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly	disturb	ed?	Are "	Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally pro	blema	tic?	(If ne	eded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	ap showing	sam	pling	g point le	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes					_
Hydric Soil Present? Yes	No			e Sampled n a Wetlar	
Wetland Hydrology Present? Yes  Remarks:	No		WILLIII	ii a wellai	103 105
Data point located on an old two tr		hills	lope	e.	
<u> </u>	Absolute	Dom	inant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 ft r	% Cover	Spec	cies?	Status	Number of Dominant Species
1. Pinus contorta	35			FAC	That Are OBL, FACW, or FAC: 2 (A)
2					Total Number of Dominant
3 4.					Species Across All Strata: 2 (B)
4	35	= Tot	al Cov	/er	Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)
Sapling/Shrub Stratum (Plot size: 15 ft r )					Prevalence Index worksheet:
1					Total % Cover of: Multiply by:
2		-			OBL species 0 x 1 = 0
3					FACW species <u>0</u> x 2 = <u>0</u>
4 5.					FAC species 65 x 3 = 195
		= Tot	al Cov	/er	FACU species $0 \times 4 = 0$
Herb Stratum (Plot size: 5 ft r )		_			UPL species $\frac{2}{x}$ $x = \frac{10}{205}$
Phleum pratense     Agrostis capillaris	<u>25</u>				Column Totals: <u>67</u> (A) <u>205</u> (B)
3 Pseudoroegneria spicata	<u>5</u> 2			FAC UPL	Prevalence Index = B/A = 3.05
4					Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation
5.					✓ 2 - Dominance Test is >50%
6.					3 - Prevalence Index is ≤3.0¹
7					4 - Morphological Adaptations <sup>1</sup> (Provide supporting
8					data in Remarks or on a separate sheet)
9					5 - Wetland Non-Vascular Plants <sup>1</sup>
10					Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must
11	00	= Tota	al Cov	 er	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)					
1					Hydrophytic
2					Vegetation Present?  Yes No
% Bare Ground in Herb Stratum 68		_= Tota	al COV	er	
Remarks:					

Dominance test passed with FAC species that are ubiquitous in upland areas in the site and so are poor wetland indicators. Upland status was determined based on soil and hydrology.

SOIL Sampling Point: DP07u

Profile Descript	ion: (Describe	to the depth	n needed to docur	nent the i	ndicator	or confirm	the absence	of indicators	s.)		
Depth	Matrix			x Feature:							
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks		
0 - 14 10	OYR 3/2	100					Sandy Loam	Gravelly			
-											
								-			
				· ·			-				—
-											
					<u> </u>		-				_
											_
				<del></del>			-				
			Reduced Matrix, CS			ed Sand Gr	rains. <sup>2</sup> Loc	ation: PL=P	ore Lining, M:	=Matrix.	
Hydric Soil Indi	cators: (Applic	able to all L	RRs, unless other	wise note	ed.)		Indicato	rs for Proble	ematic Hydri	c Soils³:	
Histosol (A1	)	_	Sandy Redox (	S5)			2 cn	n Muck (A10)			
Histic Epiped	don (A2)	_	Stripped Matrix	(S6)				Parent Mate			
Black Histic	• •	_	Loamy Mucky N			MLRA 1)	-		k Surface (TF	<del>-</del> 12)	
Hydrogen Si	, ,	_	Loamy Gleyed	•	2)		Othe	er (Explain in	Remarks)		
	low Dark Surfac	e (A11) _	Depleted Matrix	` '			3				
	Surface (A12)	=	Redox Dark Su	, ,					ytic vegetatio		
	y Mineral (S1)	_	Depleted Dark		-7)				must be pres		
	ed Matrix (S4)	_	Redox Depress	ions (F8)			unies	s disturbed o	r problematic	<u> </u>	
Restrictive Laye	er (ir present):										
Type:	`		<u>—</u>				l		.,	🗸	
Depth (inches	S):						Hydric Soil	Present?	Yes	No	_
No hydric s  HYDROLOGY  Wetland Hydrol			ei veu.								
Primary Indicator	rs (minimum of a	ne required;	check all that appl	y)			Secor	ndary Indicato	ors (2 or more	required)	
Surface Wat	ter (A1)		Water-Sta	ined Leav	es (B9) ( <b>e</b>	xcept	W	/ater-Stained	Leaves (B9)	(MLRA 1. 2	2.
High Water				1, 2, 4A, a		•		4A, and 4B		,	,
Saturation (A			Salt Crust		,		D	rainage Patte			
Water Marks	,		Aquatic In	` '	s (B13)			-	ater Table (C	(2)	
Sediment De			Hydrogen					-	ble on Aerial		(9)
Drift Deposit						Livina Roc	ots (C3) G			3-7(-	-,
Algal Mat or			Presence		_	_		hallow Aquita			
Iron Deposit			Recent Iro					AC-Neutral T			
Surface Soil	• •		Stunted or			•			unds (D6) ( <b>L</b> l	RR A)	
	/is ble on Aerial I	magery (B7)							ummocks (D		
· <del></del>	getated Concave				,				,	,	
Field Observation	<u> </u>	`	,								
Surface Water P		es N	o Depth (in	ches).							
Water Table Pres			o Depth (in								
			o Depth (in				and Hydrolog	. Dragant?	Vac	No V	
Saturation Prese (includes capillar		es iv	o _ • Deptii (ini	cries)		weti	and Hydrology	y Present?	res	NO	_
		gauge, mor	nitoring well, aerial p	ohotos, pr	evious ins	pections),	if available:				
Remarks:											
No evidend	ce of wetla	and hydi	rology obse	rved.							

Project/Site: Schrieber Lake	(	City/County	Lincoln	County	Sampling Date: 2024-07	'-17
Applicant/Owner: Montana Dept. Of Transportatio					Sampling Point: DP07w	
Investigator(s): McEldowney				nge: S13 T27N R30V	<i>'</i>	
Landform (hillslope, terrace, etc.): Floodplain						
Subregion (LRR): E 43A	_ Lat: 48.	106405		Long: -115.409559	Datum: NAD 8	33
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly	drained			NWI classific	ation: R5UBH	
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes	✓ No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrologys	ignificantly	disturbed?	Are '	Normal Circumstances" p	oresent? Yes No	
Are Vegetation, Soil, or Hydrologyn	aturally pro	blematic?		eded, explain any answe		
SUMMARY OF FINDINGS – Attach site map	showing	samplin	g point l	ocations, transects	, important features,	etc.
l	0	Is th	e Sampled	Area		
Wetland Hydrology Present? Yes V		with	in a Wetlar	nd? Yes	No	
Remarks:		l				
PEM, riverine. Wetland data point in	northe	ast por	tion of	site.		
VEGETATION – Use scientific names of plan	ts.					
Tree Stratum (Plot size: 30 ft r		Dominant Species?		Dominance Test work		
1				Number of Dominant S That Are OBL, FACW,		4)
2.						.,
3				Total Number of Domin Species Across All Stra	4	3)
4				Percent of Dominant Sp	necies	
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total Co	ver	That Are OBL, FACW,		VB)
1				Prevalence Index wor	ksheet:	
2.				Total % Cover of:		
3.					$x 1 = \frac{15}{100}$	
4				FACW species 50 FAC species 17	x 2 = 100 x 3 = 51	
5				FACU species 0	x 4 = 0	
Herb Stratum (Plot size: 5 ft r )		= Total Co	ver	UPL species 0	x 5 = 0	
1. Phalaris arundinacea	50		FACW	Column Totals: 82	(A) <u>166</u> (	(B)
2. Alopecurus arundinaceus	15		FAC	Prevalence Index	$= R/\Delta = 2.02$	
3. Carex stipata	15		OBL	Hydrophytic Vegetation		
4. Cirsium arvense	2		FAC	✓ 1 - Rapid Test for I		
5				✓ 2 - Dominance Tes	it is >50%	
6				✓ 3 - Prevalence Inde		
7					Adaptations <sup>1</sup> (Provide suppor s or on a separate sheet)	ting
8				5 - Wetland Non-Va	•	
9					phytic Vegetation <sup>1</sup> (Explain)	
11.					l and wetland hydrology mus	st .
	~~	= Total Cov	er	be present, unless distu	urbed or problematic.	
Woody Vine Stratum (Plot size:)		•				
1				Hydrophytic		
2				Vegetation Present? Ye	s No	
% Bare Ground in Herb Stratum 18	-	= Total Cov	er			
Remarks:						
Evidence of hydrophytic vegetation incl	udes a p	ositive	rapid te	st, a positive dor	ninance test, and a	

US Army Corps of Engineers

prevalence index less than or equal to 3.0.

SOIL Sampling Point: DP07w

Depth	ription: (Describe Matrix	to the depth	n needed to document the indicator or co Redox Features	ontirm the	e absence	ot indicators.)
(inches)	Color (moist)	%		oc² .	Texture	Remarks
0 - 19	10YR 2/1	100		Sa	indy Loam	Gravelly
19 - 21	10YR 5/1	100	<del></del>	Lo	oam	
	· · ·				<del></del>	
-					_	<del></del>
¹Type: C=Co	oncentration, D=De	pletion, RM=F	Reduced Matrix, CS=Covered or Coated Sa	and Grains	s. <sup>2</sup> Loc	ation: PL=Pore Lining, M=Matrix.
			RRs, unless otherwise noted.)			rs for Problematic Hydric Soils <sup>3</sup> :
Histosol	` '	_	Sandy Redox (S5)		2 cm	n Muck (A10)
	pipedon (A2)	_	Stripped Matrix (S6)			Parent Material (TF2)
Black Hi	, ,	_	Loamy Mucky Mineral (F1) (except MLF	RA 1)	-	Shallow Dark Surface (TF12)
	n Sulfide (A4)	-	Loamy Gleyed Matrix (F2)		Othe	er (Explain in Remarks)
	d Below Dark Surfac ark Surface (A12)	Le (ATT) _	Depleted Matrix (F3) Redox Dark Surface (F6)		3Indicato	rs of hydrophytic vegetation and
	lucky Mineral (S1)	_	Depleted Dark Surface (F7)			nd hydrology must be present,
-	sleyed Matrix (S4)	_	Redox Depressions (F8)			s disturbed or problematic.
	ayer (if present):		*			
Type:			<u></u>			
Depth (inc	ches):		<u> </u>	н	lydric Soil	Present? Yes No
Remarks:				I		
1116 3011	nas a tillok t	JUIN SUII	ace hydric soil indicator.			
HYDROLO						
	drology Indicators		also all all the stage of the			dem de disease (O en escare de la D
		one required;	check all that apply)	<b></b>	_	dary Indicators (2 or more required)
	Water (A1)		Water-Stained Leaves (B9) (excep	pt	W	/ater-Stained Leaves (B9) (MLRA 1, 2,
High Wa  ✓ Saturation	ter Table (A2)		MLRA 1, 2, 4A, and 4B) Salt Crust (B11)		D	4A, and 4B) rainage Patterns (B10)
Water M	` '		Sait Crust (B11) Aquatic Invertebrates (B13)			ry-Season Water Table (C2)
	nt Deposits (B2)		Hydrogen Sulfide Odor (C1)			aturation Visible on Aerial Imagery (C9)
· · · · · · · · · · · · · · · · · · ·	oosits (B3)		Oxidized Rhizospheres along Living	ng Roots ((		eomorphic Position (D2)
	it or Crust (B4)		Presence of Reduced Iron (C4)	J ( ·	· —	nallow Aquitard (D3)
_	osits (B5)		Recent Iron Reduction in Tilled Soi	oils (C6)		AC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or Stressed Plants (D1) (Li			aised Ant Mounds (D6) ( <b>LRR A</b> )
	on Vis ble on Aerial	Imagery (B7)		•		rost-Heave Hummocks (D7)
Sparsely	Vegetated Concav	ve Surface (B	8)			
Field Observ						
Surface Water			o Depth (inches):			
Water Table			o Depth (inches):			
Saturation Pr		Yes N	o Depth (inches): 6	Wetland	Hydrology	Present? Yes V No No
(includes cap Describe Red		n gauge, mon	l itoring well, aerial photos, previous inspecti	tions), if av	/ailable:	
	(	3 3-7	, , , , , , , , , , , , , , , , , , , ,	,,	-	
Remarks:						
	d at 6 inaba	o with to	vo cocondary indicators			
Saturate	at o mene	s with tv	vo secondary indicators.			

Project/Site: Schrieber Lake	c	city/County:	Lincoln (	County	Sampling Date: 2024-07-17
Applicant/Owner: Montana Dept. of Transportation				State: Montana	Sampling Point: DP08u
Investigator(s): R Baumgarten	8	Section, Tov	wnship, Rar	nge: S13 T27N R30W	
Landform (hillslope, terrace, etc.): Terrace/floodplain					
Subregion (LRR): E 43A	Lat: 48.	105829		Long: -115.409362	Datum: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly of				NWI classifica	
Are climatic / hydrologic conditions on the site typical for this	time of yea	r? Yes '			
Are Vegetation, Soil, or Hydrology sig	-				resent? Yes No
Are Vegetation, Soil, or Hydrology na				eded, explain any answers	
SUMMARY OF FINDINGS – Attach site map s					
Hydrophytic Vegetation Present? Yes No					
Hydric Soil Present? Yes No			e Sampled		No
Wetland Hydrology Present? Yes No		With	in a Wetlan	iu? res	NO
Remarks:					
Upland data point on an upland island	l.				
VEGETATION – Use scientific names of plants					
	Absolute % Cover	Dominant Species?		Dominance Test works	
1				Number of Dominant Sp That Are OBL, FACW, o	
2				Total Number of Domina	ant
3				Species Across All Strat	
4				Percent of Dominant Sp	ecies
Sapling/Shrub Stratum (Plot size: 15 ft r )		= Total Cov	/er	That Are OBL, FACW, o	r FAC: <u>0.00</u> (A/B)
1				Prevalence Index work	
2.				_	Multiply by:
3					x 1 = <u>1</u>
4					x = 0 x = 3
5					x 4 = 212
Herb Stratum (Plot size: 5 ft r		= Total Cov	∕er		x 5 = 75
1. Poa compressa	50	V	FACU	•	(A) <u>291</u> (B)
2. Linaria dalmatica	10		UPL	Prevalence Index	- P/A - 415
3. Centaurea stoebe	5		UPL	Hydrophytic Vegetation	
4. Achillea millefolium	3		FACU	1 - Rapid Test for H	
5. Cirsium arvense	1		FAC	2 - Dominance Test	
6. Persicaria amphibia	1		OBL	3 - Prevalence Inde	x is ≤3.0 <sup>1</sup>
7					daptations <sup>1</sup> (Provide supporting
8				5 - Wetland Non-Va	or on a separate sheet)
9					hytic Vegetation <sup>1</sup> (Explain)
10 11				<del>-  </del>	and wetland hydrology must
	70	= Total Cov	er	be present, unless distu	
Woody Vine Stratum (Plot size:)		. 5.6 557			
1				Hydrophytic	
2				Vegetation Present? Yes	No
% Bare Ground in Herb Stratum 30		= Total Cov	er		
Remarks:				l	
Vegetation is very dry. Site did not me	eet any	/ hydro	phytic	vegetation indic	ators.

SOIL Sampling Point: DP08u

0 - 4 4 - 12	Color (moist)		Color (moist) 0/ T 1 ; 2	T 4-	D
			Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	<u>Texture</u>	Remarks
4 - 12	10YR 2/1	100		Sandy Loam	
	10R 3/1	100		Loamy Sand	Gravelly.
-					
-					
_					
					-
				·	
				<u> </u>	
				<u> </u>	
		-	I=Reduced Matrix, CS=Covered or Coated Sand G		cation: PL=Pore Lining, M=Matrix.
-		licable to a	I LRRs, unless otherwise noted.)		ors for Problematic Hydric Soils <sup>3</sup> :
Histosol	• •		Sandy Redox (S5) Stripped Matrix (S6)		n Muck (A10) l Parent Material (TF2)
Histic Ep Black Hi	oipedon (A2)		Loamy Mucky Mineral (F1) (except MLRA 1		y Shallow Dark Surface (TF12)
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	. —	er (Explain in Remarks)
	d Below Dark Surf	ace (A11)	Depleted Matrix (F3)	0	or (Explain in Nomanio)
	ark Surface (A12)	` '/	Redox Dark Surface (F6)	<sup>3</sup> Indicato	ors of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)	)	Depleted Dark Surface (F7)	wetla	nd hydrology must be present,
	Bleyed Matrix (S4)		Redox Depressions (F8)	unles	ss disturbed or problematic.
Restrictive L	_ayer (if present)	:			
Type:					
Depth (inc	ches):			Hydric Soil	Present? Yes No
Remarks:					
YDROLO:	GY				
Wetland Hyd	drology Indicator				
Wetland Hyd			ed; check all that apply)		ndary Indicators (2 or more required)
Wetland Hyd Primary Indic Surface	cators (minimum o Water (A1)		Water-Stained Leaves (B9) (except		Vater-Stained Leaves (B9) (MLRA 1, 2,
Wetland Hyd Primary Indic Surface High Wa	cators (minimum o Water (A1) uter Table (A2)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	V	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Wetland Hyd Primary Indic Surface High Wa Saturatic	cators (minimum o Water (A1) Inter Table (A2) Inter (A3)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	v	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
Netland Hyd Primary Indic Surface High Wa Saturatio Water M	cators (minimum o Water (A1) hter Table (A2) on (A3) larks (B1)		<ul> <li>Water-Stained Leaves (B9) (except</li> <li>MLRA 1, 2, 4A, and 4B)</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> </ul>	v c c	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2)
Wetland Hyd Primary Indic Surface High Wa Saturatic Water M Sedimer	cators (minimum o Water (A1) Iter Table (A2) on (A3) Iarks (B1) Int Deposits (B2)		<ul> <li>Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> </ul>	V D S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Oraturation Visible on Aerial Imagery (C9
Wetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep	cators (minimum o Water (A1) Iter Table (A2) on (A3) Iarks (B1) Int Deposits (B2) Int Deposits (B3)		<ul> <li>Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living Ro</li> </ul>	V C C S oots (C3) G	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Prainage Patterns (B10) Pry-Season Water Table (C2) Praturation Visible on Aerial Imagery (C9) Recomorphic Position (D2)
Wetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma	cators (minimum o Water (A1) her Table (A2) on (A3) harks (B1) ht Deposits (B2) posits (B3) at or Crust (B4)		<ul> <li>Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</li> <li>Salt Crust (B11)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Living Roman Presence of Reduced Iron (C4)</li> </ul>	V C C S oots (C3) G	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Prainage Patterns (B10)  Pry-Season Water Table (C2)  Praturation Visible on Aerial Imagery (C9)  Recomorphic Position (D2)  Phallow Aquitard (D3)
Wetland Hyd Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma	cators (minimum of Water (A1) on (A3) larks (B1) on Deposits (B2) cosits (B3) at or Crust (B4) cosits (B5)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C	V C C S oots (C3) G S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Prainage Patterns (B10)  Pry-Season Water Table (C2)  Patternation Visible on Aerial Imagery (C9)  Recomorphic Position (D2)  Phallow Aquitard (D3)  AC-Neutral Test (D5)
Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface	cators (minimum o Water (A1) ter Table (A2) on (A3) larks (B1) ot Deposits (B2) cosits (B3) at or Crust (B4) posits (B5) Soil Cracks (B6)	f one require	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Roman Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (Canada Sulfide)  Stunted or Stressed Plants (D1) (LRR A)	V C C S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Parainage Patterns (B10)  Pary-Season Water Table (C2)  Eaturation Visible on Aerial Imagery (C9)  Edeomorphic Position (D2)  Edallow Aquitard (D3)  AC-Neutral Test (D5)  Eaised Ant Mounds (D6) (LRR A)
Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio	cators (minimum of water (A1)  Inter Table (A2)  Inter Table (A2)  Inter Table (B1)  Inter Table (B2)	f one require	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roman Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C4) Stunted or Stressed Plants (D1) (LRR 10) Other (Explain in Remarks)	V C C S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Prainage Patterns (B10)  Pry-Season Water Table (C2)  Patternation Visible on Aerial Imagery (C9)  Recomorphic Position (D2)  Phallow Aquitard (D3)  AC-Neutral Test (D5)
Wetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely	cators (minimum of water (A1) Inter Table (A2) Inter Table (A2) Inter Table (B1) Inter Table (B2) Inter Table (B4) Inter Tabl	f one require	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Carron Stunted or Stressed Plants (D1) (LRR 1) Other (Explain in Remarks)	V C C S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Parainage Patterns (B10)  Pary-Season Water Table (C2)  Eaturation Visible on Aerial Imagery (C9)  Edeomorphic Position (D2)  Edallow Aquitard (D3)  AC-Neutral Test (D5)  Eaised Ant Mounds (D6) (LRR A)
Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatic Sparsely	cators (minimum of Water (A1) water (A1) water Table (A2) on (A3) warks (B1) on the Deposits (B2) woosits (B3) wat or Crust (B4) woosits (B5) Soil Cracks (B6) on Vis ble on Aeria wations:	f one require al Imagery (I ave Surface	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Ro  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (C)  Stunted or Stressed Plants (D1) (LRR 6)  Other (Explain in Remarks)  (B8)	V C C S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Parainage Patterns (B10)  Pary-Season Water Table (C2)  Eaturation Visible on Aerial Imagery (C9)  Edeomorphic Position (D2)  Edallow Aquitard (D3)  AC-Neutral Test (D5)  Eaised Ant Mounds (D6) (LRR A)
Wetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Observ Surface Water	cators (minimum of water (A1) water (A1) water Table (A2) on (A3) warks (B1) on Deposits (B2) wosits (B3) water Crust (B4) wosits (B5) Soil Cracks (B6) on Vis ble on Aeria of Vegetated Concavations: er Present?	al Imagery (I ave Surface	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Ro  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (C)  Stunted or Stressed Plants (D1) (LRR A)  Other (Explain in Remarks)  No  Depth (inches):	V C C S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Parainage Patterns (B10)  Pary-Season Water Table (C2)  Eaturation Visible on Aerial Imagery (C9)  Edeomorphic Position (D2)  Edallow Aquitard (D3)  AC-Neutral Test (D5)  Eaised Ant Mounds (D6) (LRR A)
Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Observ Surface Water	cators (minimum of water (A1) water (A1) water (A2) on (A3) warks (B1) on Deposits (B2) posits (B3) water (Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeria of Vegetated Concavations: er Present? Present?	al Imagery (I ave Surface Yes Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks)  No Pepth (inches): Depth (inches):	V C S S S S S S S F F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Parainage Patterns (B10)  Pary-Season Water Table (C2)  Eaturation Visible on Aerial Imagery (C9)  Edeomorphic Position (D2)  Edallow Aquitard (D3)  AC-Neutral Test (D5)  Eaised Ant Mounds (D6) (LRR A)  rost-Heave Hummocks (D7)
Primary Indice Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Observ Surface Water Table Saturation Primary Indices	cators (minimum of water (A1) water (A1) water (A2) on (A3) warks (B1) on Deposits (B2) posits (B3) water (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeria of Vegetated Concavations: er Present? Present?	al Imagery (I ave Surface Yes Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks)  No Pepth (inches): Depth (inches):	V C S S S S S S S F F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Parainage Patterns (B10)  Pary-Season Water Table (C2)  Eaturation Visible on Aerial Imagery (C9)  Edeomorphic Position (D2)  Edallow Aquitard (D3)  AC-Neutral Test (D5)  Eaised Ant Mounds (D6) (LRR A)
Wetland Hyderimary Indices Surface High Was Saturation Water Mater Magal Males Iron Depender Surface Inundation Sparsely Field Observious Water Table Saturation Professional Professional Iron Iron Iron Iron Iron Iron Iron Iron	cators (minimum of water (A1) water (A1) water (A2) on (A3) warks (B1) on Deposits (B2) water (B4) water (B4) water (B5) Soil Cracks (B6) on Vis ble on Aeria water (Vegetated Concavations: er Present? Present? resent?	al Imagery (I ave Surface Yes Yes Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks)  No Pepth (inches): Depth (inches):	V D S S S S S S S F F tland Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Parainage Patterns (B10)  Pary-Season Water Table (C2)  Eaturation Visible on Aerial Imagery (C9)  Edeomorphic Position (D2)  Edallow Aquitard (D3)  AC-Neutral Test (D5)  Eaised Ant Mounds (D6) (LRR A)  rost-Heave Hummocks (D7)
Primary Indice Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Observ Surface Water Table Saturation Pr (includes cap	cators (minimum of water (A1) water (A1) water (A2) on (A3) warks (B1) on Deposits (B2) water (B4) water (B4) water (B5) Soil Cracks (B6) on Vis ble on Aeria water (Vegetated Concavations: er Present? Present? resent?	al Imagery (I ave Surface Yes Yes Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks)  No Depth (inches): No Depth (inches): Wet	V D S S S S S S S F F tland Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Parainage Patterns (B10)  Pary-Season Water Table (C2)  Eaturation Visible on Aerial Imagery (C9)  Edeomorphic Position (D2)  Edallow Aquitard (D3)  AC-Neutral Test (D5)  Eaised Ant Mounds (D6) (LRR A)  rost-Heave Hummocks (D7)
Wetland Hyder Primary Indice Surface High Wa Saturatio Water M Sedimen Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Observ Surface Water Table Saturation Pr (includes cap	cators (minimum of water (A1) water (A1) water (A2) on (A3) warks (B1) on Deposits (B2) water (B4) water (B4) water (B5) Soil Cracks (B6) on Vis ble on Aeria water (Vegetated Concavations: er Present? Present? resent?	al Imagery (I ave Surface Yes Yes Yes	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks)  No Depth (inches): No Depth (inches): Wet	V D S S S S S S S F F tland Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Parainage Patterns (B10)  Pary-Season Water Table (C2)  Eaturation Visible on Aerial Imagery (C9)  Edeomorphic Position (D2)  Edallow Aquitard (D3)  AC-Neutral Test (D5)  Eaised Ant Mounds (D6) (LRR A)  rost-Heave Hummocks (D7)
Wetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Observ Surface Water Table Saturation Pr (includes cap Describe Rec	cators (minimum of water (A1) water (A1) water (A2) on (A3) warks (B1) on Deposits (B2) posits (B3) water Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeria of Vegetated Concavations: water Present? Present? resent? corded Data (streat	f one require  al Imagery (I ave Surface  Yes Yes Yes am gauge, n	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Roman Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (Compared Plants (D1) (LRR 20) Other (Explain in Remarks)  No Depth (inches): Were pointering well, aerial photos, previous inspections)	V D S S S S S S S F F tland Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Parainage Patterns (B10)  Pary-Season Water Table (C2)  Eaturation Visible on Aerial Imagery (C9)  Edeomorphic Position (D2)  Edallow Aquitard (D3)  AC-Neutral Test (D5)  Eaised Ant Mounds (D6) (LRR A)  rost-Heave Hummocks (D7)
Wetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Surface Inundatio Sparsely Field Observ Surface Water Table Saturation Pr (includes cap Describe Rec	cators (minimum of water (A1) water (A1) water (A2) on (A3) warks (B1) on Deposits (B2) posits (B3) water Crust (B4) posits (B5) Soil Cracks (B6) on Vis ble on Aeria of Vegetated Concavations: water Present? Present? resent? corded Data (streat	f one require  al Imagery (I ave Surface  Yes Yes Yes am gauge, n	Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Ro Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C Stunted or Stressed Plants (D1) (LRR A Other (Explain in Remarks)  No Depth (inches): No Depth (inches): Wet	V D S S S S S S S F F tland Hydrolog	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Parainage Patterns (B10)  Pary-Season Water Table (C2)  Eaturation Visible on Aerial Imagery (C9)  Edeomorphic Position (D2)  Edallow Aquitard (D3)  AC-Neutral Test (D5)  Eaised Ant Mounds (D6) (LRR A)  rost-Heave Hummocks (D7)

Project/Site: Schrieber Lake	C	ity/County	: Lincoln (	County	Sampling Date:	2024-07-17
Applicant/Owner: Montana Dept. of Transportation				State: Montana		
Investigator(s): E Reynaud	S	Section, To	wnship, Rai	nge: S13 T27N R30W	I	
Landform (hillslope, terrace, etc.): Floodplain	L	ocal relie	f (concave, o	convex, none): Concave	∋ Slor	oe (%): 1
Subregion (LRR): E 43A	Lat: 48.1	05797		Long: -115.409301	Datur	m: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly	y drained			NWI classific	ation: PEM1C	
Are climatic / hydrologic conditions on the site typical for the	is time of yea	r? Yes	✓ No	(If no, explain in R	emarks.)	
Are Vegetation, Soil, or Hydrology	significantly d	isturbed?	Are "	Normal Circumstances" p	resent? Yes	No
Are Vegetation, Soil, or Hydrology				eded, explain any answe		
SUMMARY OF FINDINGS - Attach site map	showing	samplin	g point le	ocations, transects	, important fe	atures, etc.
Hydrophytic Vegetation Present? Yes N	No					
	No		e Sampled	Area Vac	No	
	No	With	in a Wetlan	id? fes	NO	•
Remarks:						
Data point taken in wetland adjacen	t to an u	pland	island.			
VEGETATION – Use scientific names of plan	nts.					
Tree Stratum (Plot size: 30 ft r	Absolute % Cover			Dominance Test work		
1				Number of Dominant Sp That Are OBL, FACW, of	pecies or FAC: 1	(A)
2.				Total Number of Domin		
3				Species Across All Stra		(B)
4				Percent of Dominant Sp	pecies	
Sapling/Shrub Stratum (Plot size: 15 ft r )		= Total Co	over	That Are OBL, FACW, o		) (A/B)
1. Salix lasiandra	2		FACW	Prevalence Index worl		
2				Total % Cover of: OBL species 10	x 1 = 10	y by:
3				FACW species 82		
4	·				x 3 = 30	
5		T + + 0			x 4 = 0	
Herb Stratum (Plot size: 5 ft r )	2	= Total Co	over		x 5 = 0	
1. Phalaris arundinacea	80	~	FACW	Column Totals: 102	(A) <u>204</u>	(B)
2. Cirsium arvense	10		FAC	Prevalence Index	= B/A = 2.00	
3. Persicaria amphibia	<u>10</u>		OBL	Hydrophytic Vegetation	n Indicators:	
4				✓ 1 - Rapid Test for H	lydrophytic Vegeta	ation
5				✓ 2 - Dominance Tes		
6				✓ 3 - Prevalence Inde		
7 8				4 - Morphological A data in Remarks	daptations (Provi s or on a separate	ide supporting sheet)
9.				5 - Wetland Non-Va	·	,
10				Problematic Hydrop		(Explain)
11				<sup>1</sup> Indicators of hydric soil		
	400	= Total Co	ver	be present, unless distu	rbed or problemat	IIC.
Woody Vine Stratum (Plot size:)						
1				Hydrophytic Vegetation		
2	 =			Present? Yes	s No	
Remarks:						
Evidence of hydrophytic vegetation inc	ludes a p	ositive	rapid te	st, a positive don	ninance test	, and a
prevalence index less than or equal to 3	3.0.					

Sampling Point: DP08w SOIL Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Depth Color (moist) Texture (inches) 0 - 18 10YR 2/1 100 Loam 100 10YR 5/1 Sandy Loam 18 - 24 <sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) Indicators for Problematic Hydric Soils<sup>3</sup>: \_\_\_ Sandy Redox (S5) Histosol (A1) 2 cm Muck (A10) \_\_\_ Histic Epipedon (A2) \_\_\_ Stripped Matrix (S6) Red Parent Material (TF2) \_\_\_ Black Histic (A3) \_\_\_ Loamy Mucky Mineral (F1) (except MLRA 1) Very Shallow Dark Surface (TF12) Hydrogen Sulfide (A4) Other (Explain in Remarks) Loamy Gleyed Matrix (F2) ✓ Depleted Below Dark Surface (A11) Depleted Matrix (F3) \_\_\_ Redox Dark Surface (F6) Thick Dark Surface (A12) <sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Gleyed Matrix (S4) Redox Depressions (F8) unless disturbed or problematic. Restrictive Layer (if present): Type: Depth (inches): **Hydric Soil Present?** Remarks:

The presence of a depleted matrix below a dark surface indicates the presence of hydric soils.

#### **HYDROLOGY**

IIIDKOLOGI		
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one requir	ed; 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)
Water Marks (B1)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Oxidized Rhizospheres along Living F	Roots (C3) <u><!--</u--> Geomorphic Position (D2)</u>
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) (LRF	R A) Raised Ant Mounds (D6) (LRR A)
Inundation Vis ble on Aerial Imagery (	B7) Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Sparsely Vegetated Concave Surface	(B8)	
Field Observations:		
Surface Water Present? Yes	No Depth (inches):	
Water Table Present? Yes	No Depth (inches):	
Saturation Present? Yes  (includes capillary fringe)	No Depth (inches): 0	etland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, r	nonitoring well, aerial photos, previous inspection	s), if available:
Remarks:		
		vaanaanalaia naaitian anala naaitiya
Evidence of wetland hydro	logy includes soil saturation, g	geomorphic position, and a positive
FAC-Neutral test.		

Project/Site: Schrieber Lake		City/Cou	<sub>ınty:</sub> Lincoln	County	Sampling Date: 2024-07-17
Applicant/Owner: Montana Dept. of Transportation	n	•	•	State: Montana	Sampling Point: DP09u
Investigator(s): E Reynaud	;	Section,	Township, Ra	nge: S13 T27N R30V	V
Landform (hillslope, terrace, etc.): Backslope					
					Datum: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly				NWI classific	
Are climatic / hydrologic conditions on the site typical for th					
Are Vegetation, Soil, or Hydrology	-				present? Yes V
Are Vegetation, Soil, or Hydrology				eeded, explain any answe	·
SUMMARY OF FINDINGS – Attach site map				•	,
Hydrophytic Vegetation Present? Yes N	10 <u> </u>				
Hydric Soil Present? Yes N	10 <u> </u>		s the Sampled		🗸
Wetland Hydrology Present? Yes N	No	W	vithin a Wetlar	nd? Yes	No
Remarks:					
Data point taken on an upland island	d.				
VEGETATION – Use scientific names of plar	nts.				
7 0 4 (D) 4 30 ft r			ant Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size: 30 ft r ) 1.			ss? Status	Number of Dominant S That Are OBL, FACW,	
2				Total Number of Domir	
3				Species Across All Stra	ata: <u>1</u> (B)
4			Cover	Percent of Dominant S That Are OBL, FACW,	
1				Prevalence Index wor	ksheet:
2.					Multiply by:
3.					x 1 = 3
4.					x 2 = 0
5					x 3 = 15
		= Total	Cover		x 4 = 280
Herb Stratum (Plot size: 5 ft r )					x = 0
1. Centaurea stoebe	_ <u>55</u>		<u>FACU</u>	Column Totals: <u>78</u>	(A) <u>298</u> (B)
2. Poa compressa	_ <u>15</u>		FACU	Prevalence Index	c = B/A = 3.82
3. Cirsium arvense 4 Persicaria amphibia	- <del>5</del>		FAC ORL	Hydrophytic Vegetation	
· ·			OBL	· ·	Hydrophytic Vegetation
5				2 - Dominance Tes	
6				3 - Prevalence Ind	
7					Adaptations <sup>1</sup> (Provide supporting as or on a separate sheet)
8				5 - Wetland Non-V	·
9 10					ophytic Vegetation <sup>1</sup> (Explain)
11.					il and wetland hydrology must
	70	= Total	Cover	be present, unless dist	
Woody Vine Stratum (Plot size:)		· · · · · ·	00101		
1				Hydrophytic	
2				Vegetation Present? Ye	es No
% Bare Ground in Herb Stratum 22		= Total	Cover	riesent: 16	.S INU
Remarks:					
				la contra de la contra del contra de la contra del contra de la contra del contra de la contra d	
Site is dominated by FACU species a	ana aid	not n	neet any I	nyaropnytic veg	jetation indicators.

SOIL Sampling Point: DP09u

Depth	Matrix		Redox Features		
	Color (moist)	%	Color (moist) % Type <sup>1</sup> L	oc <sup>2</sup> Texture	Remarks
0 - 9 10	OYR 3/2	100		Sandy Loam	
-					
-					
		· — — —			
				<del></del>	
-					
		·			
1T	ttion D-D	leties DM-D	advect Matrix CC-Covered as Control C		anting DI - Dage Lining M-Matrix
			educed Matrix, CS=Covered or Coated S RRs, unless otherwise noted.)		cation: PL=Pore Lining, M=Matrix.  ors for Problematic Hydric Soils <sup>3</sup> :
•	`	able to all Liv	•		•
Histosol (A1 Histic Epiped	•	_	_ Sandy Redox (S5) _ Stripped Matrix (S6)		m Muck (A10) d Parent Material (TF2)
Black Histic	, ,		_ Coamy Mucky Mineral (F1) (except ML		y Shallow Dark Surface (TF12)
Hydrogen Si			Loamy Gleyed Matrix (F2)		er (Explain in Remarks)
	elow Dark Surfac	e (A11)	_ Depleted Matrix (F3)	<u>—</u>	
	Surface (A12)	·	_ Redox Dark Surface (F6)	<sup>3</sup> Indicat	ors of hydrophytic vegetation and
Sandy Muck	ky Mineral (S1)		_ Depleted Dark Surface (F7)	wetla	and hydrology must be present,
	ed Matrix (S4)		_ Redox Depressions (F8)	unle	ss disturbed or problematic.
Restrictive Laye	er (if present):				
Туре:			<u> </u>		
Depth (inches	s):		<u> </u>	Hydric Soi	Present? Yes No
	soil indicat	ors obse	erved. Rocks at 9 inches.		
No hydric s		ors obse	erved. Rocks at 9 inches.		
No hydric s	,		erved. Rocks at 9 inches.		
IYDROLOGY Wetland Hydrol	, logy Indicators:		erved. Rocks at 9 inches.	Seco	ndary Indicators (2 or more required)
No hydric s  IYDROLOGY  Wetland Hydrol	ogy Indicators:				ndary Indicators (2 or more required) Vater-Stained Leaves (B9) ( <b>MLRA 1, 2</b> ,
No hydric s  HYDROLOGY  Wetland Hydrol  Primary Indicator	logy Indicators: rs (minimum of c ter (A1)		check all that apply)		
No hydric s  HYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water	logy Indicators: rs (minimum of coter (A1) Table (A2)		check all that apply) Water-Stained Leaves (B9) (exce	\	Vater-Stained Leaves (B9) (MLRA 1, 2,
No hydric s  YDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat	logy Indicators: rs (minimum of coter (A1) Table (A2)		check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)	pt \	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
No hydric s  IYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A	rs (minimum of coter (A1) Table (A2) A3) s (B1)		check all that apply) Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B) Salt Crust (B11)	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10)
No hydric s  IYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks	logy Indicators: rs (minimum of coter (A1) Table (A2) A3) s (B1) eposits (B2)		check all that apply)  Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)	pt \ [ [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9
No hydric s  HYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks  Sediment De	logy Indicators: rs (minimum of coter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3)		check all that apply)  Water-Stained Leaves (B9) (exce	\ [ _ [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9
No hydric s  HYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks  Sediment De  Drift Deposit	logy Indicators: rs (minimum of coter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4)		check all that apply)  Water-Stained Leaves (B9) (exce	[	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Wetland Hydrol Primary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or	logy Indicators: rs (minimum of coter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) r Crust (B4) is (B5)		check all that apply)  Water-Stained Leaves (B9) (exce	[ [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
No hydric s  IYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks  Sediment De  Drift Deposit  Algal Mat or  Iron Deposit  Surface Soil	logy Indicators: rs (minimum of coter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) r Crust (B4) is (B5)	ne required; c	check all that apply)  Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livit  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Sc	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
No hydric s  IYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks  Sediment De  Drift Deposit  Algal Mat or  Iron Deposit  Surface Soil  Inundation (A)	logy Indicators: rs (minimum of oter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6)	ne required; c	check all that apply)  Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livit  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Sc  Stunted or Stressed Plants (D1) (I	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
No hydric s  IYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks  Sediment De  Drift Deposit  Algal Mat or  Iron Deposit  Surface Soil  Inundation (A)	logy Indicators: rs (minimum of coter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) r Crust (B4) ts (B5) I Cracks (B6) /is ble on Aerial Ingetated Concave	ne required; c	check all that apply)  Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livit  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Sc  Stunted or Stressed Plants (D1) (I	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
No hydric s  HYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks  Sediment De  Drift Deposit  Algal Mat or  Iron Deposit  Surface Soil  Inundation V  Sparsely Ve	logy Indicators: rs (minimum of coter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) r Crust (B4) ts (B5) l Cracks (B6) /is ble on Aerial Ingetated Concave	magery (B7)	Check all that apply)  — Water-Stained Leaves (B9) (exce  MLRA 1, 2, 4A, and 4B)  — Salt Crust (B11)  — Aquatic Invertebrates (B13)  — Hydrogen Sulfide Odor (C1)  — Oxidized Rhizospheres along Livin  — Presence of Reduced Iron (C4)  — Recent Iron Reduction in Tilled So  — Stunted or Stressed Plants (D1) (I  — Other (Explain in Remarks)	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
No hydric s  IYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks  Sediment De  Drift Deposit  Algal Mat or  Iron Deposit  Surface Soil  Inundation V  Sparsely Ve  Field Observation	logy Indicators: rs (minimum of conterter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) rs (B5) l Cracks (B6) /is ble on Aerial Ingetated Concave ons: resent?	magery (B7) e Surface (B8)	Check all that apply)  Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livin  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Sc  Stunted or Stressed Plants (D1) (Inc.)  Other (Explain in Remarks)	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
No hydric s  IYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks  Sediment De  Drift Deposit  Algal Mat or  Iron Deposit  Surface Soil  Inundation V  Sparsely Ve  Field Observatie  Surface Water P  Water Table Pres	logy Indicators: rs (minimum of oter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) s (B5) I Cracks (B6) /is ble on Aerial I getated Concave ons: resent? Y	magery (B7) e Surface (B8) es No es No	check all that apply)  Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livit  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Sc  Stunted or Stressed Plants (D1) (I  Other (Explain in Remarks)  Depth (inches):  Depth (inches):	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
No hydric s  IYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks  Sediment De  Drift Deposit  Algal Mat or  Iron Deposit  Surface Soil  Inundation V  Sparsely Ve  Field Observation  Surface Water P  Water Table Prese  Saturation Presee  (includes capillar	logy Indicators: rs (minimum of oter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) is (B5) l Cracks (B6) /is ble on Aerial I getated Concave ons: resent? yent? yent? yent? yent? Yentinge)	magery (B7) e Surface (B8) es No es No es No	check all that apply)  Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livit  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Sc  Stunted or Stressed Plants (D1) (I  Other (Explain in Remarks)  Depth (inches):  Depth (inches):	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
No hydric s  IYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks  Sediment De  Drift Deposit  Algal Mat or  Iron Deposit  Surface Soil  Inundation V  Sparsely Ve  Field Observation  Surface Water P  Water Table Prese  Saturation Presee  (includes capillar	logy Indicators: rs (minimum of oter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) is (B5) l Cracks (B6) /is ble on Aerial I getated Concave ons: resent? yent? yent? yent? yent? Yentinge)	magery (B7) e Surface (B8) es No es No es No	check all that apply)  Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livit  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Sc  Stunted or Stressed Plants (D1) (I  Other (Explain in Remarks)  Depth (inches):  Depth (inches):	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
No hydric s  IYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks  Sediment De  Drift Deposit  Algal Mat or  Iron Deposit  Surface Soil  Inundation V  Sparsely Ve  Field Observation  Surface Water P  Water Table Prese  Saturation Presee  (includes capillar	logy Indicators: rs (minimum of oter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) is (B5) l Cracks (B6) /is ble on Aerial I getated Concave ons: resent? yent? yent? yent? yent? Yentinge)	magery (B7) e Surface (B8) es No es No es No	check all that apply)  Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livit  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Sc  Stunted or Stressed Plants (D1) (I  Other (Explain in Remarks)  Depth (inches):  Depth (inches):	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
No hydric s  IYDROLOGY  Wetland Hydrol  Primary Indicator  Surface Wat  High Water  Saturation (A  Water Marks  Sediment De  Drift Deposit  Algal Mat or  Iron Deposit  Surface Soil  Inundation V  Sparsely Ve  Field Observation  Surface Water P  Water Table Prese  Saturation Presee  (includes capillar	logy Indicators: rs (minimum of oter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) is (B5) l Cracks (B6) /is ble on Aerial I getated Concave ons: resent? yent? yent? yent? yent? Yentinge)	magery (B7) e Surface (B8) es No es No es No	check all that apply)  Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livit  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Sc  Stunted or Stressed Plants (D1) (I  Other (Explain in Remarks)  Depth (inches):  Depth (inches):	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Wetland Hydrol Primary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Surface Soil Inundation V Sparsely Ve Field Observatio Surface Water P Water Table Pres Saturation Prese (includes capillar Describe Record	logy Indicators: rs (minimum of oter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) ts (B5) I Cracks (B6) //is ble on Aerial I rgetated Concave ons: rresent? y ent? ry fringe) led Data (stream	magery (B7) e Surface (B8) es No es No gauge, monit	Check all that apply)  Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Living Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Scale Stunted or Stressed Plants (D1) (Inches)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):  Depth (inches):	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Wetland Hydrol Primary Indicator Surface Wat High Water Saturation (A Water Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Surface Soil Inundation V Sparsely Ve Field Observatio Surface Water P Water Table Pres Saturation Prese (includes capillar Describe Record	logy Indicators: rs (minimum of oter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) ts (B5) I Cracks (B6) //is ble on Aerial I rgetated Concave ons: rresent? y ent? ry fringe) led Data (stream	magery (B7) e Surface (B8) es No es No gauge, monit	check all that apply)  Water-Stained Leaves (B9) (exce MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)  Hydrogen Sulfide Odor (C1)  Oxidized Rhizospheres along Livit  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Sc  Stunted or Stressed Plants (D1) (I  Other (Explain in Remarks)  Depth (inches):  Depth (inches):	pt [	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Orainage Patterns (B10)  Ory-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)

### WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Schrieber Lake	(	City/Cour	<sub>nty:</sub> Lincoln (	County	Sampling Date:	2024-07-17
Applicant/Owner: Montana Dept. of Transportation		-	-	State: Montana	· -	
				nge: S13 T27N R30V		
Landform (hillslope, terrace, etc.): Terrace/floodplain				_		ne (%): 0
Subregion (LRR): E 43A				. ,		,
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly				NWI classific		
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrologys	-			Normal Circumstances" p		/ No
Are Vegetation, Soil, or Hydrologyn				eded, explain any answe		
SUMMARY OF FINDINGS – Attach site map						eatures, etc.
Hydrophytic Vegetation Present? Yes N	0					
Hydric Soil Present? Yes N	o <u> </u>		the Sampled ithin a Wetlan		, No	
Wetland Hydrology Present? Yes N	0	W	illilli a vvellar	iur res	NO	-
Remarks:						
Wetland data point near upland island. Problematic soi determination.	i but veget	ation an	a nyarology r	nave strong indicators t	nat justify the we	etiand
VEGETATION – Use scientific names of plan	ts.					
Tree Stratum (Plot size: 30 ft r	Absolute		ant Indicator	Dominance Test work	sheet:	
1	-		s? Status	Number of Dominant S That Are OBL, FACW,		(A)
2				Total Number of Domin	nant	
3				Species Across All Stra		(B)
4				Percent of Dominant Sp	pecies	_
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total	Cover	That Are OBL, FACW,	· · · · · · · · · · · · · · · · · · ·	0 (A/B)
1				Prevalence Index wor		
2.				Total % Cover of:		ly by:
3.				· · · · · · · · · · · · · · · · · · ·	x 1 = 5	
4				FACW species 61		
5				•	x 3 = 18	
		= Total	Cover	FACU species 2		
Herb Stratum (Plot size: 5 ft r )	00		E 4 0)4/	UPL species 1 Column Totals: 75	x 5 = <u>5</u> (A) 158	
Phalaris arundinacea     Cirsium arvense	60				(,	B (B)
2. Cristan arvense 3. Persicaria amphibia	- <u>5</u> 5		<u>FAC</u> OBL	Prevalence Index		
4. Achillea millefolium	1	-	FACU	Hydrophytic Vegetation		
5. Alopecurus pratensis	1		FAC	1 - Rapid Test for I		ation
6. Bromus inermis	- <del></del>	-	UPL	<u>✓</u> 2 - Dominance Tes		
7. Carex tenera	1	-	FACW	3 - Prevalence Inde		: d
8. Verbascum thapsus	1		FACU	4 - Morphological A data in Remarks	Adaptations (Prov s or on a separate	
9.				5 - Wetland Non-Va	ascular Plants <sup>1</sup>	
10				Problematic Hydro	phytic Vegetation <sup>1</sup>	(Explain)
11.				<sup>1</sup> Indicators of hydric soi		
	75	= Total C	Cover	be present, unless distu	urbed or problema	itic.
Woody Vine Stratum (Plot size:)						
1				Hydrophytic		
2				Vegetation Present? Ye	es <u> </u>	
% Bare Ground in Herb Stratum 25		= Total C	Cover			_ <del>_</del>
Remarks:						
Evidence of hydrophytic vegetation incl	udes a p	oositiv	e rapid te	st and a positive	dominance	test.

SOIL Sampling Point: DP09w

Profile Des	crintion: (Describe	a to the den	th needed to docur	nent the	indicator	or confirm	n the absence	of indicators )
Depth	Matrix	e to the dep		x Feature		or commi	ii tile abseilee	of malcators.)
(inches)	Color (moist)	%	Color (moist)	<u> </u>	Type <sup>1</sup>	Loc²	Texture	Remarks
0 - 4	10YR 2/1	100					Sandy Loam	
4 - 12	10YR 2/1	60	N 2.5/0	20	D	М	Silty Clay Loam	Complex layer.
	10YR 3/3	20	<u> </u>				Silty Clay Loam	Complex layer.
12 - 14	10YR 2/1	100			<del></del>		Loam	
12 17	1011 2/1	100		· ———			LUaiii	Gravelly.
	-							
	-				-			
					-			
<sup>1</sup> Type: C=C	oncentration, D=De	pletion, RM=	Reduced Matrix, CS	S=Covere	d or Coate	ed Sand G		cation: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Appli	cable to all	LRRs, unless other	wise not	ted.)		Indicato	ors for Problematic Hydric Soils <sup>3</sup> :
Histoso			Sandy Redox (S					m Muck (A10)
	pipedon (A2)		Stripped Matrix					d Parent Material (TF2)
	istic (A3)		Loamy Mucky N			t MLRA 1)		y Shallow Dark Surface (TF12)
	en Sulfide (A4) d Below Dark Surfa	ce (Δ11)	Loamy Gleyed   Depleted Matrix		<u> </u>		<u>•</u> Oth	er (Explain in Remarks)
	ark Surface (A12)	ice (ATT)	Redox Dark Su		١		3Indicate	ors of hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted Dark S					and hydrology must be present,
	Gleyed Matrix (S4)		Redox Depress					ss disturbed or problematic.
	Layer (if present):		·					-
Type:								
Depth (in	ches):						Hydric Soil	l Present? Yes No 🔽
HYDROLO	GY							
_	drology Indicators						_	
	•	one required	d; check all that appl					ndary Indicators (2 or more required)
· <del></del>	Water (A1)		Water-Sta			except	V	Vater-Stained Leaves (B9) (MLRA 1, 2,
-	ater Table (A2)			1, 2, 4A,	and 4B)		_	4A, and 4B)
<u>✓</u> Saturati			Salt Crust		(D.10)			Orainage Patterns (B10)
	Marks (B1)		Aquatic In		, ,			Ory-Season Water Table (C2)
	nt Deposits (B2)		Hydrogen			Livina Do		Saturation Visible on Aerial Imagery (C9
	posits (B3) at or Crust (B4)		Oxidized F Presence		_	-	—	Geomorphic Position (D2) Shallow Aquitard (D3)
	posits (B5)		Recent Iro					FAC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or			•	,	Raised Ant Mounds (D6) (LRR A)
	ion Vis ble on Aerial	I Imagery (B				(LIKIX A		Frost-Heave Hummocks (D7)
	y Vegetated Conca				J		<u> </u>	(2.7)
Field Obser	, ,		- /					
Surface Wat	ter Present?	Yes	No Depth (in	ches):				
Water Table			No Pepth (in					
Saturation F	resent?		No Depth (in				and Hydrolog	y Present? Yes No
	pillary fringe) corded Data (strear	m gauge mo	onitoring well, aerial	ohotos ni	revious ins	spections)	if available:	
200020		gaaga,		oo.co, p.		,,		
Remarks:								
Data no	int was satu	ratad et	6 inches					
Data po	iiit was satu	iateu at	o inches.					

#### WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: Schrieber Lake	(	City/Co	ounty	Lincoln	County	Sampling Date:	2024-07-18
Applicant/Owner: Montana Dept. Of Transportation		-	-		State: Montana		
					nge: S13 T27N R30V		
Landform (hillslope, terrace, etc.): Flat					-		pe (%): 0
Subregion (LRR): E 43A							
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly					NWI classific		
Are climatic / hydrologic conditions on the site typical for th							
Are Vegetation, Soil, or Hydrology					Normal Circumstances"		No
Are Vegetation, Soil, or Hydrology					eded, explain any answe		110
SUMMARY OF FINDINGS – Attach site map							eatures, etc.
	No				<u> </u>	<u>· · · · · · · · · · · · · · · · · · · </u>	<u> </u>
Hydric Soil Present? Yes N	lo			e Sampled		, No	
Wetland Hydrology Present? Yes N	lo		with	in a Wetlar	id? Yes	No	_
Remarks: PSS wetland with organic soils in center of bog birch (	Potulo num	ila) os	see Ni	a unland n	oint an icolated data r	agint historically	has boon
taken in this location.	betula pulli	iia) Ca	arr. IN	o upiano pi	oint - an isolated data p	onit historically i	nas been
VEGETATION – Use scientific names of plar	nte						
VEGETATION OSC SCIENTING Harnes of plan	Absolute	Dom	inant	Indicator	Dominance Test work	rsheet.	
Tree Stratum (Plot size: 30 ft r	% Cover				Number of Dominant S		
1					That Are OBL, FACW,		(A)
2					Total Number of Domir	nant	
3					Species Across All Stra	ata: <u>5</u>	(B)
4			-1.0-		Percent of Dominant S		0
Sapling/Shrub Stratum (Plot size: 15 ft r		= Tot	ai Co	ver	That Are OBL, FACW,		0 (A/B)
1. Betula pumila	40		/	OBL	Prevalence Index wor		L. L
2. Salix barclayi	5			FACW	Total % Cover of: OBL species 75	<u>Multipl</u> x 1 = 75	ly by:
3					OBL species 75 FACW species 15	x 1 = 70 x 2 = 30	
4						$x_3 = 0$	
5						x 4 = 0	
Herb Stratum (Plot size: 5 ft r )	45	= Tot	al Co	ver		x 5 = 0	
1. Carex lasiocarpa	10	·	/	OBL	Column Totals: 90	(A) <u>105</u>	(B)
2. Comarum palustre	10	-	/	OBL	Prevalence Index	, - Β/Λ - 1.16	
3. Persicaria amphibia	10	·	/	OBL	Hydrophytic Vegetation		
4. Phalaris arundinacea	10			FACW	1 - Rapid Test for I		ation
5. Carex vesicaria	5			OBL	✓ 2 - Dominance Tes	st is >50%	
6					✓ 3 - Prevalence Ind	ex is ≤3.0 <sup>1</sup>	
7					4 - Morphological		
8						s or on a separate	e sheet)
9					5 - Wetland Non-V Problematic Hydro		(Evolain)
10		-			Indicators of hydric so	· ·	
11.	45		al Cov	· · · · · · · · · · · · · · · · · · ·	be present, unless dist		
Woody Vine Stratum (Plot size:)		_ 1010	ai 00v	Ci			
1					Hydrophytic		
2					Vegetation Present? Ye	es No	
9/ Para Cround in Harb Stratum 55		= Tota	al Cov	er	riesein: Te	:5 INU	<u> </u>
% Bare Ground in Herb Stratum 55  Remarks:					<u> </u>		
	–						•.•

PSS dominated by bog birch (Betula pumila). Evidence of hydrophytic vegetation includes a positive rapid test, a positive dominance test, and a prevalence index less than or equal to 3.0.

SOIL Sampling Point: DP10w

Depth	cription: (Describe Matrix	to the depth		<b>nent the indic</b> k Features	ator or contiff	i die absence	of indicators.)
(inches)	Color (moist)	%	Color (moist)		vpe <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
0 - 16	10YR 2/2	100				Peat	Sulfidic odor.
-							
-							
	-						
-							
	oncentration, D=De Indicators: (Applicators)				Coated Sand Gr		cation: PL=Pore Lining, M=Matrix.  ors for Problematic Hydric Soils <sup>3</sup> :
-							•
✓ Histosol	pipedon (A2)		Sandy Redox (S Stripped Matrix				n Muck (A10) I Parent Material (TF2)
	istic (A3)		Loamy Mucky M		xcent MIRA 1)		y Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed		Koopt III 2 1 (1 )		er (Explain in Remarks)
	d Below Dark Surfac	ce (A11)	Depleted Matrix			<del></del>	,
	ark Surface (A12)	_	Redox Dark Sur				ors of hydrophytic vegetation and
-	Mucky Mineral (S1)	_	Depleted Dark S				nd hydrology must be present,
	Gleyed Matrix (S4)		Redox Depress	ions (F8)		unles	s disturbed or problematic.
	Layer (if present):						
Depth (in	ches):		<del>_</del>			Hydric Soil	Present? Yes No
Remarks:							
Histosol	with a sulfic	lic odor					
HYDROLO	GY						
Wetland Hy	drology Indicators	:					
Primary Indi	cators (minimum of	one required; c	heck all that apply	/)		Secor	ndary Indicators (2 or more required)
✓ Surface	Water (A1)		Water-Stai	ned Leaves (E	39) (except	v	Vater-Stained Leaves (B9) (MLRA 1, 2,
✓ High Wa	ater Table (A2)			1, 2, 4A, and 4			4A, and 4B)
✓ Saturati			Salt Crust			D	Prainage Patterns (B10)
Water N	larks (B1)		Aquatic Inv	ertebrates (B	13)	<u>~</u> D	ry-Season Water Table (C2)
Sedime	nt Deposits (B2)		✓ Hydrogen :	Sulfide Odor (	C1)	<u>~</u> s	aturation Visible on Aerial Imagery (C9)
Drift De	posits (B3)		Oxidized R	hizospheres a	along Living Roc	ots (C3) 👱 G	Geomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presence of	of Reduced Iro	on (C4)	s	hallow Aquitard (D3)
Iron De	oosits (B5)		Recent Iro	n Reduction in	Tilled Soils (C6	6) <u>~</u> F	AC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted or	Stressed Plan	nts (D1) (LRR A	) R	Raised Ant Mounds (D6) (LRR A)
Inundati	on Vis ble on Aerial	Imagery (B7)	Other (Exp	lain in Remarl	ks)	F	rost-Heave Hummocks (D7)
Sparsel	y Vegetated Concav	ve Surface (B8)					
Field Obser							
Surface Wat			Depth (inc	-			
Water Table			Depth (inc				
Saturation P		Yes 🖊 No	Depth (inc	ches): 0	Wetla	and Hydrolog	y Present? Yes No
	pillary fringe)				ie inenactiona)	if available:	
Describe Re	corded Data (stream	n gauge, monit	omig well, aerial p	motos, previot	us mispections),	ıı avallable:	
Domanica							
Remarks:							
<b>Pockets</b>	of inundate	d vegetat	ion. Satura	ated to th	ne surface	with a su	ulfidic odor.
		-					

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

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

3. Evaluation Date: 07/17/2024 4. Evaluator(s): R McEldowney, E Reynaud, R 5. Wetlands/Site #(s): Schrieber Lake

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

ii. Approx. Stationing or Mileposts:

iii. Watershed: 1 Approximately Milepost 53.8

Watershed Name, County:

Kootenai, Lincoln

7. a. Evaluating Agency: CCI for MDT

b. Purpose of Evaluation:

1. Wetlands potentially affected by MDT project 55.660 acres (measured)

2. \_\_\_ Mitigation wetlands; pre-construction 8. Wetland size: 55.660 acres (measured)

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

**4.** Other:

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

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

Abbreviations: (see manual for definitions)

**HGM Classes:** Riverine (**R**), Depressional (**D**), Slope (**S**), Mineral Soil Flats (**MSF**), Organic Soil Flats (**OSF**), Lacustrine Fringe (**LF**); **Cowardin Classes:** Rock Bottom (**RB**), Unconsolidated bottom (**UB**),

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

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

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

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

#### 12. General condition of AA:

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

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

Comments: (types of disturbance, intensity, season, etc.): Highway 2 and USFS roads are adjacent to the AA, land is not cultivated, minimal noxious weeds, and low disturbance.

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

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

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

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

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

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

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

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

Grizzly Bear(D)

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

Spalding's Catchfly(S)

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

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

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

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

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

Primary or critical habitat (list species)

Primary or critical habitat (list species)

Secondary habitat (list species)

Secondary habitat (list species)

Incidental habitat (list species)

Western Toad(D) - S2S3

Fisher(D) - S2S3

Westslope cuthroat trout (S2), fisher (S3)

Salix candida (S3/S4), Western toad (S2)

Townsend's big-eared bat (S3), hoary bat

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

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

Sources for documented use (e.g. observations, records, etc): MDT BRR. USFS, MTNHP, and MFWP databases and discussions with regional wildlife and fisheries biologists. Western toads were observed by MDT and Kootenai Nat'l Forest personnel in April 2011.

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

interviews with local biologists with knowledge of the AA

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

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

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

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

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

mirtaning (acc and con	minimizer in a serior serior in a management of the serior in a management of the serior seri										
Evidence of wildlife use (i)	Wildlife habitat features rating (ii)										
Evidence of wildlife use (i)		Exceptional	High	Moderate	Moderate						
Substantia	ıl	1E	.9H	.8H	.7M						
Moderate		.9H	.7M	.5M	.3L						
Minimal	_	.6M	.4M	.2L	.1L						

Comments: Good habitat diversity with substantial evidence of wildlife usage.

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

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

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

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

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

- ii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1)
- a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? If yes, reduce score in i above by 0.1.
- b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area, etc.- specify in comments) for native fish or introduced game fish? If yes, add 0.1 to the adjusted score in i or iia.
- iii. Final Score and Rating: 0.7M

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

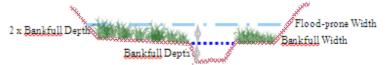
14E. Flood Attenuation: (Applies only to wetlands subject to flooding via in-channel or overbank flow. If wetlands in AA are not flooded from in-channel or overbank flow, mark \_\_\_ **NA** and proceed to 14F.)

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

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

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

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



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

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

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

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

**Comments:** Extensive areas of inundation, much greater than 5 acre-feet, observed in 2024 and previous monitoring events.

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

NA and proceed to 14H.)

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

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

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

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

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

		1 0/	
% Cover of <u>wetland</u> streambank or	Duration	of surface water adjacent to rooted ve	egetation
shoreline by species with stability ratings of >=6 (see <b>Appendix F</b> ).	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral
>= 65%	1H	.9H	.7M
35-64%	.7M	.6M	.5M
35%	.3L	.2L	.1L

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

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

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

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

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

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

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

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

X If yes, add 0.1 to the score in ii

iv. Final Score and Rating: 1.00H
Comments: High level of biological activity, vegetated component > 5 acres, perennial inundation, and has surface and subsurface outlets.

#### 14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below) i. Discharge Indicators ii. Recharge Indicators Χ The AA is a slope wetland Permeable substrate present without underlying impeding layer X 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: AA permanently flooded during drought periods Wetland contains an outlet, but no inlet Χ 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 [circle] the functional points and rating) Duration of saturation at AA Wetlands FROM GROUNDWATER DISCHARGE OR WITH WATER THAT IS RECHARGING THE **GROUNDWATER SYSTEM** P/P S/I None Criteria 1H .7M 4M .1L **Groundwater Discharge or Recharge** N/A **Insufficient Data/Information** 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 [circle] the functional points and rating) AA does not contain previously cited AA contains fen, bog, warm springs AA does not contain previously cited rare types and structural diversity or mature (>80 yr-old) forested rare types or associations and Replacement potential (#13) is high **or** contains plant wetland or plant association listed structural diversity (#13) is lowassociation listed as "S2" by the as "S1" by the MTNHP moderate **MTNHP** Estimated relative abundance (#11) rare common abundant common abundant common abundant rare rare 1H Low disturbance at AA (#12i) .9H .8H .8H .6M .5M .5M 4M 3L .9H Moderate disturbance at AA (#12i) .8H .7M .7M .5M .4M .4M 3L 2L High disturbance at AA (#12i) .8H .7M .6M .6M .4M 3L 3L 2L .1L 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: (circle) X (if 'Yes' continue with the evaluation; if 'No' then mark NA and proceed to the overall summary and rating page) ii. Check categories that apply to the AA: **X** Educational/scientific study; **X** Consumptive rec.; **X** Non-consumptive rec.; Other: iii. Rating:

Known or Potential Recreation or Education Area	Known	Potential
Public ownership or public easement with general public access (no permission required)	.2H	.15H
Private ownership with general public access (no permission required)	.15H	.1M
Private or public ownership without general public access, or requiring permission for public access	.1M	.05L

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**

The beaver dam impounding water at the outlet of Schrieber Lake first observed in 2019 appeared to be inactive during the 2024 site visit. No sign of freshly cut sticks or newly placed packed mud was observed.

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

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units: (Actual Points x Wetland Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	М	0.80	1	44.53	
B. MT Natural Heritage Program Species Habitat	Н	0.90	1	50.09	
C. General Wildlife Habitat	Е	1.00	1	55.66	*
D. General Fish Habitat	М	0.70	1	38.96	
E. Flood Attenuation	М	0.60	1	33.40	
F. Short and Long Term Surface Water Storage	Н	1.00	1	55.66	*
G. Sediment/Nutrient/Toxicant Removal	Н	1.00	1	55.66	
H. Sediment/Shoreline Stabilization	Н	1.00	1	55.66	
I. Production Export/Food Chain Support	Н	1.00	1	55.66	*
J. Groundwater Discharge/Recharge	Н	1.00	1	55.66	
K. Uniqueness	Н	1.00	1	55.66	*
L. Recreation/Education Potential (bonus points)	Н	0.20	1	11.13	
Totals:  Percent of Possible Score		10.20	11.00 93%	567.73	

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

#### OVERALL ANALYSIS AREA RATING: I

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

Scientific Name	Common Name	WMVC Indicator Status <sup>(1)</sup>	
Abies grandis	Grand fir	FACU	
Achillea millefolium	Common yarrow	FACU	
Agrostis capillaris	Colonial bentgrass	FAC	
Agrostis scabra	Rough bentgrass	FAC	
Agrostis stolonifera	Spreading bentgrass	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	Meadow foxtail	FAC	
Alyssum alyssoides	Pale madwort	UPL	
Amelanchier alnifolia	Saskatoon serviceberry	FACU	
Antennaria microphylla	Littleleaf pussytoes	UPL	
Antennaria spp.	Pussytoes	N/A	
Apocynum androsaemifolium	Spreading dogbane	FACU	
Arctostaphylos uva-ursi	Kinnikinnick	FACU	
Arnica cordifolia	Heartleaf arnica	UPL	
Berberis repens	Creeping barberry	UPL	
Berteroa incana	Hoary alyssum	UPL	
Betula pumila	Bog birch	OBL	
Bromus carinatus	Mountain brome	UPL	
Bromus inermis	Smooth brome	UPL	
Bromus tectorum	Cheatgrass	UPL	
Calamagrostis rubescens	Pinegrass	UPL	
Campanula rotundifolia	Bluebell bellflower	FACU	
Carex aquatilis	Water sedge	OBL	
Carex bebbii	Bebb's sedge	OBL	
Carex geyeri	Geyer's sedge	UPL	
Carex inops	Sun sedge	UPL	
Carex lasiocarpa	Woollyfruit sedge	OBL	
Carex nebrascensis	Nebraska sedge	OBL	
Carex pellita	Woolly sedge	OBL	
Carex simulata	Analogue sedge	OBL	
Carex spp.	Sedge	N/A	
Carex utriculata	Northwest territory sedge	OBL	
Carex vesicaria	Blister sedge	OBL	
Carex stipata	Stalkgrain sedge	OBL	
Centaurea stoebe	Spotted knapweed	UPL	
Cirsium arvense	Canadian thistle	FAC	

Scientific Name	Common Name	WMVC Indicator Status <sup>(1)</sup>	
Cirsium vulgare	Bull thistle	FACU	
Comarum palustre	Purple marshlocks	OBL	
Convolvulus arvensis	Field bindweed	UPL	
Cornus canadensis	Bunchberry dogwood	FAC	
Crataegus douglasii	Black hawthorn	FAC	
Cynoglossum officinale	Houndstongue	FACU	
Dactylis glomerata	Orchardgrass	FACU	
Deschampsia caespitosa	Tufted hairgrass	FACW	
Eleocharis palustris	Common spikerush	OBL	
Elymus glaucus	Blue wildrye	FACU	
Elymus repens	Quackgrass	FAC	
Elymus trachycaulus	Slender wheatgrass	FAC	
Epilobium ciliatum	Fringed willowherb	FACW	
Equisetum arvense	Field horsetail	FAC	
Festuca rubra	Red fescue	FAC	
Fragaria virginiana	Virginia strawberry	FACU	
Galium triflorum	Fragrant bedstraw	FACU	
Geum macrophyllum	Largeleaf avens	FAC	
Glyceria grandis	American mannagrass	OBL	
Glyceria striata	Fowl mannagrass	OBL	
Gnaphalium palustre	Western marsh cudweed	FACW	
Hieracium aurantiacum	Orange hawkweed	NL	
Hieracium scouleri	Scouler's woollyweed	NL	
Hypericum perforatum	Common St. Johnswort	FACU	
Juncus nodosus	Knotted rush	OBL	
Juncus tenuis	Poverty rush	FAC	
Larix occidentalis	Western larch	FACU	
Lemna minor	Common duckweed	OBL	
Lepidium draba	Whitetop	UPL	
Leucanthemum vulgare	Oxeye daisy	FACU	
Linaria dalmatica	Dalmatian toadflax	UPL	
Linaria vulgaris	Butter-and-eggs	UPL	
Linnaea borealis	Twinflower	FACU	
Lonicera utahensis	Utah honeysuckle	FAC	
Maianthemum stellatum	Starry false lily of the valley	FAC	
Mentha arvensis	American wild mint	FACW	
Moss	Sphagnum/Aulacomnium moss	N/A	
Myriophyllum sibiricum	Shortspike watermilfoil	OBL	
Nassella viridula	Green needlegrass	UPL	

Scientific Name	Common Name	WMVC Indicator Status <sup>(1)</sup>
Nuphar polysepala	Rocky Mountain pond lily	OBL
Onosmodium bejariense var. bejariense	Soft-hair marbleseed	UPL
Pascopyrum smithii	Western wheatgrass	FACU
Penstemon confertus	Yellow beardtongue	UPL
Penstemon spp.	Beardtongue	N/A
Persicaria amphibia	Water smartweed	OBL
Phalaris arundinacea	Reed canarygrass	FACW
Phleum pratense	Timothy	FACU
Picea engelmannii	Englemann spruce	FAC
Picea glauca	White spruce	FAC
Pinus contorta	Lodgepole pine	FAC
Pinus monticola	Western white pine	FACU
Pinus ponderosa	Ponderosa pine	FACU
Plantago major	Common plantain	N/A
Poa compressa	Flat-stem bluegrass	FACU
Poa palustris	Fowl bluegrass	FAC
Poa pratensis	Kentucky bluegrass	FAC
Poa spp.	Bluegrass	N/A
Potentilla anserina	Silverweed cinquefoil	OBL
Potentilla norvegica	Norwegian cinquefoil	FAC
Prunus virginiana	Chokecherry	FACU
Pseudoroegneria spicata	Bluebunch wheatgrass	UPL
Pseudotsuga menziesii	Douglas fir	FACU
Rhamnus alnifolia	Alderleaf buckthorn	FACW
Rosa woodsii	Woods' rose	FACU
Rumex acetosa	Garden sorrel	FAC
Rumex acetosella	Common sheep sorrel	FACU
Salix barclayi	Barclay's willow	FACW
Salix bebbiana	Bebb's willow	FACW
Salix boothii	Booth's willow	FACW
Salix candida	Sageleaf willow	OBL
Salix geyeriana	Geyer willow	FACW
Salix lasiandra	Pacific willow	FACW
Salix spp.	Willow	N/A
Scirpus microcarpus	Panicled bulrush	OBL
Scutellaria galericulata	Hooded skullcap	OBL
Shepherdia canadensis	Russet buffaloberry	UPL
Sisymbrium altissimum	Tall tumblemustard	FACU
Symphoricarpos albus	Common snowberry	FACU

Scientific Name	Common Name	WMVC Indicator Status <sup>(1)</sup>
Symphyotrichum spathulatum	Western mountain aster	FAC
Taraxacum officinale	Common dandelion	FACU
Thlaspi arvense	Field pennycress	UPL
Trifolium aureum	Golden clover	UPL
Typha latifolia	Broadleaf cattail	OBL
Urtica dioica	Stinging nettle	FAC
Utricularia minor	Lesser bladderwort	OBL
Vaccinium spp.	Huckleberry	N/A
Verbascum thapsus	Common mullein	FACU

<sup>&</sup>lt;sup>1</sup> 2020 NWPL (USACE 2020)

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

NL changed to UPL for species.

NL changed to N/A for genus, algae, or moss.

# 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: 2024



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: 2024



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: 2024



**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: 2024



**Photo Point:** 2 – Photo 2 Bearing: 205 degrees

Location: Near corral Year: 2015



**Photo Point:** 2 – Photo 2 Bearing: 205 degrees

Location: Near corral Year: 2024



**Photo Point:** 2 – Photo 3 Bearing: 162 degrees

Location: Near corral Year: 2015



**Photo Point:** 2 – Photo 3 Bearing: 162 degrees

Location: Near corral Year: 2024



**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: 2024



**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: 2024



Photo Point: 3 Bearing: 183 degrees

Location: West of corrals

Year: 2015



Photo Point: 3 Bearing: 183 degrees

Location: West of corrals

Year: 2024



**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: 2024



**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: 2024



**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



Year: 2015



**Photo Point:** 5 – Photo 3 Bearing: 359 degrees



Year: 2024



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: 2024



**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: 2024



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: 2024



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



Bearing: 299 degrees

Photo Point: 7 – Photo 2 Location: South end of Transect 2 Year: 2024



**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: 2024



**Photo Point:** 8 – Photo 1 Local Bearing: 320 degrees Year

Location: Interior of site Year: 2015



**Photo Point:** 8 – Photo 1 Location: Interior of site Bearing: 320 degrees Year: 2024



**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: 2024



**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: 2024



**Photo Point:** 9 – Photo 1 Bearing: 323 degrees

Location: Upland island, site center Year: 2015



**Photo Point:** 9 – Photo 1 Loca Bearing: 323 degrees Year:

Location: Upland island, site center Year: 2024



**Photo Point:** 9 – Photo 2 Bearing: 120 degrees

Location: Upland island, site center Year: 2015



Photo Point: 9 – Photo 2 Bearing: 120 degrees

Location: Upland island, site center Year: 2024



Photo Point: 10 Bearing: 39 degrees

Location: Overlook Year: 2015



Photo Point: 10 Bearing: 39 degrees

Location: Overlook Year: 2024

### **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: 2024



**Transect 1:** End Bearing: 71 degrees

Location: T-1 Year: 2015



**Transect 1**: End Bearing: 71 degrees

Location: T-1 Year: 2024



**Transect 2:** Start Bearing: 152 degrees

Location: T-2 Year: 2015



**Transect 2:** Start Bearing: 152 degrees

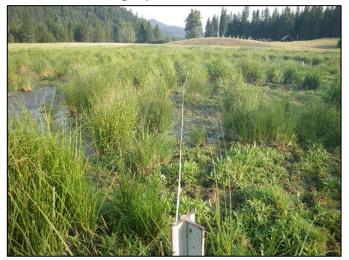
Location: T-2 Year: 2024

### **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: 2024



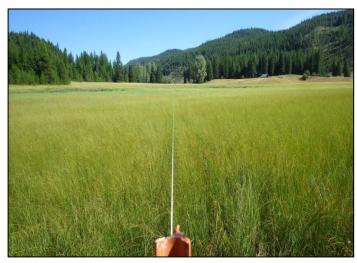
**Transect 3:** Start Bearing: 175 degrees

Location: T-3 Year: 2015



**Transect 3:** Start Bearing: 175 degrees

Location: T-3 Year: 2024



**Transect 3:** End Bearing: 355 degrees

Location: T-3 Year: 2015



**Transect 3:** End Bearing: 355 degrees

Location: T-3 Year: 2024



Data Point: DP01w Year: 2024

Location: Veg Comm. 3



Data Point: DP01u Year: 2024

Location: Veg Comm. 1



Data Point: DP02w Year: 2024

Location: Veg Comm. 3



Data Point: DP02u Year: 2024

Location: Veg Comm. 14



Data Point: DP03w Year: 2024

Location: Veg Comm. 3



Data Point: DP03u

Year: 2024

Location: Veg Comm. 5



Data Point: DP04w Year: 2024

Location: Veg Comm. 8



Data Point: DP04u Year: 2024

Location: Veg Comm. 5



Data Point: DP05w Year: 2024

Location: Veg Comm. 3



Data Point: DP05u Year: 2024

Location: Veg Comm. 5



Data Point: DP06w Year: 2024

Location: Veg Comm. 3



Data Point: DP06u

Location: Veg Comm. 5

Year: 2024



**Data Point:** DP07w Year: 2024

Location: Veg Comm. 3



**Data Point:** DP07u Year: 2024

Location: Veg Comm. 1



**Data Point:** DP08w Year: 2024

Location: Veg Comm. 8



**Data Point:** DP08u Year: 2024

Location: Veg Comm. 1



Data Point: DP09w

Year: 2024

Location: Veg Comm. 8



Data Point: DP09u

Year: 2024

Location: Veg Comm. 1



**Data Point:** DP-BETPUM Year: 2024

Location: Veg Comm. 2



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

Location: Schrieber Creek Year: 2016



Cross-Section: SC1-1 Bearing: 300° - Upstream

Location: Schrieber Creek Year: 2024



Cross-Section: SC1-1 Bearing: 30° - North bank

Location: Schrieber Creek Year: 2016



Bearing: 30° - North bank

Cross-Section: SC1-1 Location: Schrieber Creek Year: 2024



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

Location: Schrieber Creek Year: 2016



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

Location: Schrieber Creek Year: 2024

C-16



**Cross-Section: SC1-2**Bearing: 10° – North bank

Location: Schrieber Creek Year: 2016



**Cross-Section: SC1-2**Bearing: 10° – North bank

Location: Schrieber Creek Year: 2024



**Cross-Section: SC2A-1**Bearing: 315° – Downstream

Location: Schrieber Creek Year: 2016



**Cross-Section: SC2A-1**Bearing: 315° – Downstream

Location: Schrieber Creek Year: 2024



**Cross-Section: SC2A-1**Bearing: 45° – Northeast bank

Location: Schrieber Creek Year: 2016



**Cross-Section: SC2A-1**Bearing: 45° – Northeast bank

Location: Schrieber Creek Year: 2024



**Cross-Section: SC2A-2**Bearing: 185° – Downstream

Location: Schrieber Creek Year: 2016



**Cross-Section: SC2A-2**Bearing: 185° – Downstream

Location: Schrieber Creek Year: 2024



Cross-Section: SC2A-2 Bearing: 275° – West bank

Location: Schrieber Creek Year: 2016



Cross-Section: SC2A-2 Bearing: 275° – West bank

Location: Schrieber Creek Year: 2024



**Cross-Section: SC2B-1**Bearing: 175° – Downstream

Location: Schrieber Creek Year: 2016



**Cross-Section: SC2B-1**Bearing: 175° – Downstream

Location: Schrieber Creek Year: 2024



**Cross-Section: SC2B-1**Bearing: 265° – West bank

Location: Schrieber Creek Year: 2016



**Cross-Section: SC2B-1**Bearing: 265° – West bank

Location: Schrieber Creek Year: 2024



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

Location: Schrieber Creek Year: 2016



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

Location: Schrieber Creek Year: 2024



**Cross-Section: SC3-1**Bearing: 330° – North bank

Location: Schrieber Creek Year: 2016



**Cross-Section: SC3-1**Bearing: 330° – North bank

Location: Schrieber Creek Year: 2024



**Cross-Section: SC3-2**Bearing: 160° – Downstream

Location: Schrieber Creek Year: 2016



**Cross-Section: SC3-2**Bearing: 160° – Downstream

Location: Schrieber Creek Year: 2024



Cross-Section: SC3-2 Bearing: 70° – East bank

Location: Schrieber Creek Year: 2016



**Cross-Section: SC3-2** Location: Schrie Bearing: 70° – East bank Year: 2024



**Cross-Section: SC7-1**Bearing: 110° – Downstream

Location: Schrieber Creek Year: 2016



**Cross-Section: SC7-1**Bearing: 110° – Downstream

Location: Schrieber Creek Year: 2024

## **Schrieber Lake: Cross-Section Photographs**



**Cross-Section: SC7-1**Bearing: 20° – North bank

Location: Schrieber Creek Year: 2016



**Cross-Section: SC7-1**Bearing: 20° – North bank

Location: Schrieber Creek Year: 2024



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

Location: Coyote Creek Year: 2016



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

Location: Coyote Creek Year: 2024



**Cross-Section: CC1A-1**Bearing: 320° – North bank

Location: Coyote Creek Year: 2016



**Cross-Section: CC1A-1**Bearing: 320° – North bank

Location: Coyote Creek Year: 2024

## **Schrieber Lake: Cross-Section Photographs**



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

Location: Coyote Creek Year: 2016



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

Location: Coyote Creek Year: 2024



**Cross-Section: CC1A-2**Bearing: 355° – North bank

Location: Coyote Creek Year: 2016



**Cross-Section: CC1A-2**Bearing: 355° – North bank

Location: Coyote Creek Year: 2024



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

Location: Coyote Creek Year: 2016



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

Location: Coyote Creek Year: 2024

## **Schrieber Lake: Cross-Section Photographs**



**Cross-Section: CC1B-1**Bearing: 110° – East bank

Location: Coyote Creek Year: 2016



**Cross-Section: CC1B-1**Bearing: 110° – East bank

Location: Coyote Creek Year: 2024

# APPENDIX D

# PFC Assessments & Surveyed Stream Cross Sections

MDT Wetland Mitigation Monitoring Schrieber Lake Lincoln County, Montana

## **Proper Functioning Condition – Standard Checklist**

Name of Riparian-Wetland Area: Coyote Creek, Lower Schrieber Creek, MDT's Schrieber Lake Aquatic

Resource Mitigation Site, Lincoln County, MT

Date: August and November 2024

Segment/Reach ID: CC1A-1, CC1A-2, CC1B-1, SC3-1, SC3-2, SC7-1 ID Team Observers: R. McEldowney, Keeghan Lauver, Cole Buller

Yes	No	N/A	HYDROLOGY
х			1) Floodplain above bankfull is inundated in "relatively frequent" events.  Entire adjacent wetland is permanently inundated or saturated. When high flows enter these reaches, they likely dissipate quickly with a slight increase in water surface elevation in the
			adjacent wetland.
		x	2) Where beaver dams are present they are active and stable.
		^	No beaver activity observed in these reaches.
			3) Sinuosity, width/depth ratio, and gradient are in balance with the landscape setting (i.e.,
X			landform, geology, and bioclimatic region).
_ ^			Following the first monitoring year and subsequent section measurements, the dimensionless
			parameters are within the range for the intended stream type (E).
V			4) Riparian-wetland area is widening or has achieved potential extent.
Х			The riparian-wetland area has achieved its potential extent.
· ·			5) Upland watershed is not contributing to riparian-wetland degradation.
X			To date the upland watershed has not contributed to riparian-wetland degradation.

Yes	No	N/A	VEGETATION
Х			6) There is diverse age-class distribution of riparian-wetland vegetation (recruitment for maintenance/recovery).  The primarily herbaceous community is comprised of numerous species, including several sedge species, reed canarygrass, and forbs such as smartweed.
Х			7) There is diverse composition of riparian-wetland vegetation (for maintenance/recovery).  Plant species diversity is relatively high.
Х			8) Species present indicate maintenance of riparian-wetland soil moisture characteristics.  The plant species present are primarily OBL and FACW species, which is indicative that the riparian-wetland soil moisture regime is being maintained.
х			9) Streambank vegetation is comprised of those plants or plant communities that have root masses capable of withstanding high streamflow events.  Dense root masses present along entire length of both Coyote Creek and lower Schrieber Creek.
Х			10) Riparian-wetland plants exhibit high vigor. The plants along this reach exhibit high vigor.
Х			11) Adequate riparian-wetland vegetative cover is present to protect banks and dissipate energy during high flows.  The streambanks have nearly 100 percent vegetative cover.
	х		12) Plant communities are an adequate source of coarse and/or large woody material (for maintenance/recovery).  Plant communities primarily herbaceous along both channels.

Yes	No	N/A	EROSION/DEPOSITION
Х			13) Floodplain and channel characteristics (i.e., rocks, overflow channels, coarse and/or large woody material) are adequate to dissipate energy.  The high level of inundation, overflow benches, and vegetative roughness are adequate for energy dissipation.
		Х	14) Point bars are revegetating with riparian-wetland vegetation. Point bars are not present in these E channel streams.
Х			15) Lateral stream movement is associated with natural sinuosity.  No evidence of bank erosion, stable streambanks, smooth channel margins.
Х			16) System is vertically stable. See cross-sections, the channel is vertically stable and has been throughout the ten years of monitoring.
Х			17) Stream is in balance with the water and sediment being supplied by the watershed (i.e., no excessive erosion or deposition).  No trends in headcutting, channel incision, or excessive deposition observed.

(Revised 1998)

#### **Remarks:**

The lower hay meadow within the project area contains constructed and reactivated portions of Coyote and Schrieber Creek. Both reaches have similar characteristics, typical of a meandering, low gradient, wet meadow, E-type stream. The banks are well vegetated with high root density. The pattern and profile of both streams appear stable after ten monitoring years, with little to no lateral or vertical movement observed. The extensive, well vegetated floodplain should readily dissipate the energy associated with high flow events. Minimal sedimentation has been observed in some areas of the stream, which is expected in this low gradient system. Therefore, these reaches were scored with a Proper Functioning Condition.

<b>Summary Determination Funct</b>	tional Rating	Remarks
Proper Functioning Condition	Х	These reaches consistently have water and are in dynamic equilibrium with the surrounding landscape.
Functional—At Risk		
Nonfunctional		
Unknown		
Trend for Functional—At Risk:		
Upward		
Downward		
Not Apparent		
Are factors contributing to una	cceptable cor	nditions outside the control of the manager?
Yes		
No	Х	
If yes, what are those factors?		
Flow regulations		
Channelization		
Augmented flows		
Mining activities		
Road encroachment		
Other (specify)		
Upstream channel conditions		
Oil field water discharge		

## **Proper Functioning Condition – Standard Checklist**

Name of Riparian-Wetland Area: Upper Schrieber Creek, MDT's Schrieber Lake Aquatic Resource

Mitigation Site, Lincoln County, MT

**Date:** August and November 2024 **Segment/Reach ID:** SC1-1, SC1-2

ID Team Observers: R. McEldowney, Keeghan Lauver, Cole Buller

Yes	No	N/ A	HYDROLOGY
			1) Floodplain above bankfull is inundated in "relatively frequent" events.
		х	No evidence of overbank flows observed over the last ten years of monitoring. The system is ephemeral and incised. Given the infrequent and low volume flows that have occurred over the past 10 years it appears that a floodplain is unnecessary for this section of Schrieber Creek.
			2) Where beaver dams are present they are active and stable.
		Х	No beaver activity observed, likely because there is no free flowing water in the upper portion of Schrieber Creek.
Х			3) Sinuosity, width/depth ratio, and gradient are in balance with the landscape setting (i.e., landform, geology, and bioclimatic region).  This is a constructed stream. Previous evaluations have indicated that the dimensionless parameters are off target for the intended stream type (B). After 10 years of monitoring the stream appears to be stable, not exhibiting undue degradation or aggradation (see cross-sections). This suggests that the upper segment of Schrieber Creek is in dynamic equilibrium with the landscape.
Х			4) Riparian-wetland area is widening or has achieved potential extent.  The riparian-wetland area is restricted in this segment of Schrieber Creek due to the shape of the channel, and has therefore achieved its potential extent.
х			5) Upland watershed is not contributing to riparian-wetland degradation.  There does not appear to be excessive sediment load being delivered into the reach and the channel is able to handle the current flow regime. With the nearby development occurring just upgradient of the property boundary, it will be interesting to see if that has any affect on sediment or water flow in the channel.

Yes	No	N/A	VEGETATION
х			6) There is diverse age-class distribution of riparian-wetland vegetation (recruitment for maintenance/recovery).  Primarily an herbaceous dominated community composed of reed canarygrass, quackgrass, and creeping meadow foxtail. While some barer patches are present overall the streambanks are well vegetated and are sufficient for maintenance and recovery.
х			7) There is diverse composition of riparian-wetland vegetation (for maintenance/recovery). Vegetation is more diverse than in previous years, but remains dominated by non-natives, such as quackgrass, reed canarygrass, meadow foxtail. Some willows were observed occasionally along the channel margins. More forbs are also present.
Х			8) Species present indicate maintenance of riparian-wetland soil moisture characteristics. FAC/FACW species are dominant, indicating that the riparian-wetland soil moisture regime is present.

Yes	No	N/A	VEGETATION		
х			9) Streambank vegetation is comprised of those plants or plant communities that have root masses capable of withstanding high streamflow events.  Based on the lack of bank erosion or vertical downcutting, it appears that the streambank vegetation is sufficient to withstand any streamflow events that have occurred in this portion of Schrieber Creek over the past 10 years. Some bare patches exist, but there are significant patches of deep-rooted plants that will eventually fill in the gaps along the streambank.		
х			.0) Riparian-wetland plants exhibit high vigor.		
х			11) Adequate riparian-wetland vegetative cover is present to protect banks and dissipate energy during high flows.  Some patches have less cover than other areas, but overall there is adequate cover of riparian-wetland vegetation present to protect the streambanks, especially in consideration of infrequent and low volume flows this section of Schrieber Creek experiences on a regular basis.		
		х	12) Plant communities are an adequate source of coarse and/or large woody material (for maintenance/recovery).  Based on the size of this segment of Schrieber Creek and its ephemeral nature, woody material is not needed for this reach to function properly. Some woody material was placed in this channel when it was constructed and it has not moved.		

Yes	No	N/A	EROSION/DEPOSITION
			13) Floodplain and channel characteristics (i.e., rocks, overflow channels, coarse and/or
X			large woody material) are adequate to dissipate energy.
^			The engineered drop structures and imported coarse streambed material appear adequate
			at dispersing energy.
			14) Point bars are revegetating with riparian-wetland vegetation.
Х			Point bars are limited in these reaches, but where they exist they are vegetated with
			riparian-wetland vegetation.
			15) Lateral stream movement is associated with natural sinuosity.
	Х		No lateral movement observed over the ten-year monitoring period. This is due to its
			ephemeral nature and the lack of consistent bankfull or higher flow events.
			16) System is vertically stable.
Х			The cross-sections indicate that these reaches are vertically stable, and have been over the
			past 10 years. Very little to no change has occurred.
			17) Stream is in balance with the water and sediment being supplied by the watershed (i.e.,
Х			no excessive erosion or deposition).
			No headcutting, channel incision, or excessive deposition observed.

(Revised 1998)

#### Remarks:

See individual comments. The pattern and profile appear stable after ten monitoring years. There has been no obvious evidence of frequent out of bank flooding observed. This constructed reach appears to be functioning properly, although revegetation has been slower here than in other reaches due to its ephemeral nature and steeper side slopes. Patches of less vegetation and exposed geotextile fabric in the banks is observed in some locations along this reach; however, this reach is stable and in dynamic equilibrium for the amount of water flow and sediment that is being delivered to the stream on a regular basis. The area upstream of these two reaches is being developed into residential lots. It will be important to continue to monitor these upper reaches of Schrieber Creek to determine if that development is having any affect on the channel.

<b>Summary Determination Function</b>	tional Rating	Remarks				
Proper Functioning Condition	Х	Constructed ephemeral channel reach, characterized by infrequent and low volume discharges.				
Functional—At Risk						
Nonfunctional						
Unknown						
Trend for Functional—At Risk:						
Upward						
Downward						
Not Apparent						
Are factors contributing to unacceptable conditions outside the control of the manager?						
Yes						
No	Х					
If yes, what are those factors?						
Flow regulations						
Channelization						
Augmented flows						
Mining activities						
Road encroachment						
Other (specify)						
Upstream channel conditions						
Oil field water discharge						

## **Proper Functioning Condition – Standard Checklist**

Name of Riparian-Wetland Area: Middle Schrieber Creek, MDT's Schrieber Lake Aquatic Resource

Mitigation Site, Lincoln County, MT

Date: August and November 2024

Segment/Reach ID: SC2A-1, SC2A-2, SC2B-1

ID Team Observers: R. McEldowney, Keeghan Lauver, Cole Buller

Yes	No	N/A	HYDROLOGY
		х	1) Floodplain above bankfull is inundated in "relatively frequent" events As with the upper reach of Schrieber Creek, no evidence of overbank flows has been observed over the last ten years of monitoring. Given the infrequent and low volume flows that have occurred over the past 10 years it appears that a floodplain is unnecessary for this middle section of Schrieber Creek.
		Х	2) Where beaver dams are present they are active and stable No beaver activity observed.
	x		3) Sinuosity, width/depth ratio, and gradient are in balance with the landscape setting (i.e., landform, geology, and bioclimatic region)  This is a constructed stream. Previous evaluations have indicated that the dimensionless parameters are off target for the intended stream type (B and C). After 10 years of monitoring the stream appears to be stable, not exhibiting undue degradation or aggradation (see cross-sections). This suggests that this middle segment of Schrieber Creek is in dynamic equilibrium with the landscape.
х			4) Riparian-wetland area is widening or has achieved potential extent This reach appears to have reached its potential extent with no clear increase in width from 2023.
Х			5) Upland watershed is not contributing to riparian-wetland degradation  There does not appear to be excessive sediment load being delivered into the reach and the channel is able to handle the current flow regime. With the nearby residential development occurring just upgradient of the property boundary, this situation may change in the future.

Yes	No	N/A	VEGETATION
			6) There is diverse age-class distribution of riparian-wetland vegetation (recruitment for
			maintenance/recovery)
	Х		There is a forb-dominated community composed of primarily non-native graminoids such as
			reed canarygrass, quackgrass, bentgrass, and creeping meadow foxtail. Overall, the
			streambanks are well vegetated and are sufficient for maintenance and recovery.
Х			7) There is diverse composition of riparian-wetland vegetation (for maintenance/recovery)
^			Numerous herbaceous species present, occasional willow species also present.
			8) Species present indicate maintenance of riparian-wetland soil moisture characteristics
X			FAC/FACW species are dominant, indicating that a riparian-wetland soil moisture regime is
			present.
			9) Streambank vegetation is comprised of those plants or plant communities that have root
			masses capable of withstanding high streamflow events
Х			Dense root masses present along most of this reach. No bed or bank erosion observed,
			indicating that the streambank vegetation is adequate to withstand any streamflow events
			that have occurred over the past 10 years.

Yes	No	N/A	VEGETATION
Х			10) Riparian-wetland plants exhibit high vigor
^			No vegetative stress indicators were observed.
Х			11) Adequate riparian-wetland vegetative cover is present to protect banks and dissipate energy during high flows.  This reach has adequate cover of riparian-wetland vegetation to protect the streambanks and dissipate energy during any high flow events that may occur.
		х	12) Plant communities are an adequate source of coarse and/or large woody material (for maintenance/recovery)  Based on the size of the middle reach of Schrieber Creek and its ephemeral nature, woody material is not needed for this reach to function properly. Some woody material was placed in this channel when it was constructed and it has not moved.

Yes	No	N/A	EROSION/DEPOSITION	
			13) Floodplain and channel characteristics (i.e., rocks, overflow channels, coarse and/or	
x			large woody material) are adequate to dissipate energy	
			The engineered drop structures and imported coarse streambed material appear adequate	
			for dispersing energy.	
			14) Point bars are revegetating with riparian-wetland vegetation	
X			Point bars are limited in these reaches, but where they exist they are vegetated with	
			riparian-wetland vegetation.	
	15) Lateral stream movement is associated with natural sinuosity			
X No lateral movement observed over the ten-year monitoring			No lateral movement observed over the ten-year monitoring period. This is due to its	
			ephemeral nature and the lack of consistent bankfull or higher flow events.	
	16) System is vertically stable			
Х			The cross-sections indicate that these reaches are vertically stable, and have been over the	
			past 10 years. Very little to no change has occurred.	
			17) Stream is in balance with the water and sediment being supplied by the watershed (i.e.,	
Х			no excessive erosion or deposition)	
			No head-cutting, channel incision, or excessive deposition observed.	

(Revised 1998)

#### Remarks:

See individual comments. The pattern and profile appear stable after ten monitoring years. There has been no obvious evidence of frequent out-of-bank flooding observed. This constructed reach appears to be functioning properly and is more vegetated overall than the upper section of Schrieber Creek. This includes a much more vegetated channel bed, likely a result of increased moisture availability, a less steep channel gradient, and less steep channel side slopes.

Summary Determination Function	tional Rating	Remarks				
Proper Functioning Condition	Х	Constructed ephemeral channel reach, characterized by infrequent and low volume discharges. Channel and streambanks are well vegetated with primarily herbaceous riparian-wetland vegetation.				
Functional—At Risk						
Nonfunctional						
Unknown						
Trend for Functional—At Risk:	Trend for Functional—At Risk:					
Upward						
Downward						
Not Apparent						
Are factors contributing to una	cceptable cor	nditions outside the control of the manager?				
Yes						
No	Х					
If yes, what are those factors?	If yes, what are those factors?					
Flow regulations						
Channelization						
Augmented flows						
Mining activities						
Road encroachment						
Other (specify)						
Upstream channel conditions						
Oil field water discharge						

