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

#### **SCHRIEBER MEADOWS MITIGATION SITE**

#### **Project Overview**

MDT Project Number: NH 27 (021) UPN # 1027001 Watershed: Watershed #1 – Kootenai River Basin

**Monitoring Year: 2024** 

Years Monitored: 14<sup>th</sup> year of monitoring.

Corps Permit Number: NWO-2004-90280-MTH

SPA Authorization Number: MDT-R1-88-2010

Monitoring Conducted By: Confluence Consulting Inc. Dates Monitoring Was Conducted: July 15-16, 2024

**Purpose of the Approved Project:** 

The site was constructed to provide 17.84 acres of compensatory wetland mitigation credits and 35,551 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 enhance existing wetlands by restoring natural hydrology in the meadow and constructing a series of shallow depressional wetland cells. The project restored the Coyote Creek channel and added 3,327 linear feet of stream length.

**Site Location:** The mitigation site includes approximately 60 acres within the 147-acre MDT-owned parcel and a 16-acre easement within the Kootenai National Forest.

Latitude: 48.110423 Longitude: -115.41562 County: Lincoln Nearest Town: Libby, MT Map Included: See Figure 1, page 11

Mitigation Site Construction Started: Fall 2007 Construction Ended: Fall 2011

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

**Activity:** Weed Control **Date:** The site was treated on 5/1/2024 for oxeye daisy, orange hawkweed, common mullein, and spotted knapweed.

**Specific recommendations for any additional corrective actions:** Weed control management efforts will continue in 2025.

**Anticipated Wetland Credit Acres: 17.84** 

Wetland Credit Acres Generated to Date: 28.62

Stream Credits Generated to Date: 35,551

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

mitigation.aspx

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

Requirements (from approved mitigation plan or Department of Army (DA) permit conditions)

**Performance Standards:** A summary of performance standards, associated success criteria, and 2024 achievement status for the Schrieber Meadows site is provided in Table 1.

**Table 1. Summary of Performance Standards** 

Performance Standards	Success Criteria	Criteria Achieved Y/N	Discussion
Wetland Characteristics	Meet the three parameter criteria for hydrology, vegetation, and soils as outlined in the 1987 Wetland Delineation Manual and 2010 Mountains, Valleys, Coast Region.	Υ	Areas identified as wetland habitat within the mitigation site meet the three parameter criteria.
Wetland Hydrology	Soil saturation present for at least 12.5 percent of the growing season.	Y	Areas identified as wetland habitat within the mitigation site exhibit soil saturation for a minimum 12.5 percent of growing season.
	Hydric soil conditions present or appear to be forming.	Y	Hydric soil characteristics have developed throughout all constructed wetlands.
Hydric Soil	Soil is sufficiently stable to prevent erosion.	Y	In 2024, disturbed soil was stable and did not exhibit signs of erosion.
	Soil is able to support plant cover.  Achieved where combined absolute cover of facultative or wetter species is ≥70 percent	Y	Plant cover is well established across disturbed soils.  Areas identified as wetland habitat within the mitigation site have approximately 90% hydrophytic vegetation (OBL, FACW, and FAC).
	Montana State-listed noxious weeds do not exceed 5 percent absolute cover.	Y	State-listed noxious weeds are estimated below 5 percent absolute cover within wetland areas.
	Noxious weeds do not exceed 10 percent cover within the riparian buffer areas.	Y	State-listed noxious weeds are estimated between 3 to 5 percent absolute cover within the riparian buffer.
Hydrophytic Vegetation	Creditable buffer areas must have at least 50 percent aerial cover of non-weed species by the end of the monitoring period.	Y	Non-weed vegetation consists of greater than 70 percent cover, by a near-monoculture of reed canary grass, within riparian buffer areas.
	Achieved where combined aerial cover of riparian and stream bank vegetation communities is ≥70 percent.	Υ	Riparian and stream bank vegetation communities support greater than 70 percent cover.
	Planted trees and shrubs will be considered successful where they exhibit 50 percent survival after 5 years.	N	Following planting installation, unanticipated high groundwater elevations drowned a majority of plantings by the end of the second growing season. Approximately 2 percent survival was noted in 2024.
Stream Bank Vegetation	Considered successful when banks are vegetated with a majority of deep-rooting riparian plant species having root stability indexes ≥6.	Y	Reed canary grass dominates the stream banks and has a root stability index of 9.
Channel Restoration Success	Revegetation along the new Coyote and Schrieber Creek channel corridors will be considered successful when banks are vegetated with a majority of deeprooting riparian and wetland herbaceous species having root stability indexes ≥ 6 and woody plant species.	Y	The majority of stream bank vegetation along the constructed Coyote and Schrieber Creek channel corridors is dominated by reed canary grass, which has a stability rating of 9.
	The intent of the stream restoration is to allow for the stream to naturally migrate within the floodplain and to give it enough room to move and stabilize itself within the site.	Y	The stream has plenty of space within the floodplain for natural migration. The stream currently appears stable with no lateral adjustment observed following construction.

Performance Standards	Success Criteria	Criteria Achieved Y/N	Discussion
Open Water	It is the intent of the project to provide open water during the spring and early summer within excavated depressions. As the growing season progresses and the groundwater levels recede, it is anticipated that vegetation will germinate within the majority of the depressions. Open water with submerged and/or floating vegetation will therefore be considered successful and creditable.	Y	Excavated depressions within the very northern portion of the site experience seasonal drawdown and rooted floating hydrophytic and rooted emergent vegetation development has been observed. Those depressions in the southern portion of the site support perennial inundation with an established aquatic macrophyte community.
	Noxious weeds do not exceed 5 percent cover within upland buffer areas.	Υ	In 2024, noxious weed cover was less than 5 percent within the upland buffer.
Upland Buffer	Any area disturbed within creditable buffer zone must have at least 50 percent aerial cover of non-weed species by end of monitoring period.	Y	Disturbed areas have established greater than 50 percent aerial cover by non-weed species.
Weed Control	Will be based upon annual monitoring of the site to determine weed species and degree of infestation within the site, and control measures based upon the 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 across the site have been monitored and mapped during each post-construction monitoring event. MDT administers an ongoing weed-control program. Weed control efforts took place in May 2024.

#### **Summary Data**

A total of 45.83 acres of wetland and aquatic habitat were delineated within the Schrieber Meadows wetland mitigation site in 2024 (Table 2). This includes 32.00 acres of wetland, 0.34 acres of stream channel, 5.81 acres of open water, and 7.68 acres of stream channel buffer (Table 2).

Table 2. Wetland & Aquatic Habitat Acreage Delineated From 2020 Through 2024

Habitat Type	2020	2021	2022	2023	2024
навітат туре	Acreage	Acreage	Acreage	Acreage	Acreage
Wetland	31.44	31.20	33.38	32.56	32.00
Stream Channel	0.34	0.34	0.34	0.34	0.34
Open Water	7.44	6.63	6.47	5.81	5.81
Riparian Stream Buffer	8.30	8.30	7.52	7.13	7.68
Total Wetland & Aquatic Habitat	47.52	46.47	47.71	45.84	45.83

**Wetland Delineation** – The original wetland delineations conducted in 2004 and 2005, prior to the project's construction, identified four wetland areas totaling approximately 15.56 acres within the mitigation project area. A total of approximately 3.72 acres of mitigation credit were developed in the original pilot project in 2007, involving 2.38 credit acres of wetland creation, 0.75 credit acres of restoration (rehabilitation) of existing wetlands (1.12 acres), and 0.59 credit acres of upland (2.96 acres) buffer around these wetlands. After the second construction phase was completed, the delineation

conducted in 2012 mapped a total of 31.44 acres of wetland across the site. A total of 32.00 acres of wetland were delineated at the site in 2024 (Table 2; see maps in Appendix A).

The total wetland acreage delineated in 2024 decreased 0.56 acres from 2023. The decrease in wetland acreage occurred mainly in the west-central portion of the site where the wetland boundary is more gradual due to gentle slope angles in this area and a monoculture of reed canarygrass. The revision in acreage is likely the result of drought conditions in the area beginning in 2022. In 2024, MDT requested delineation of wetlands that have not previously been mapped due to wetlands extending outside of the project boundary (Appendix A). These additional wetlands between the Schrieber Meadows and Schrieber Lake project boundaries accounted for 0.86 acres of the 32.00 wetland acres delineated in 2024.

In 2020, the USACE (N. Green, personal communication, May 6, 2020) provided guidance on open water, defining it as "areas of open water of any depth with less than 5% rooted emergent vegetation, no vegetation, submerged non-rooted vegetation, and/or submerged vegetation rooted in the substrate that does not extend above the water surface." In accordance with USACE guidance, open water accounted for 5.81 acres of the mitigation site in 2024. A beaver dam observed at the outlet of Schrieber Lake from 2019 through 2024 is contributing to a shift in wetland development by increasing perennial inundation across the southern two-thirds of the Schrieber Meadows site. Initially, the elevated water table led to an increase in open water. In the following years, native vegetation such as *Carex* spp. has begun establishing in the open water areas.

**Vegetation** – A total of 163 plant species have been identified at the site from 2010 through 2024 (Appendix B). Seven new species were identified in 2024 within transects and at data point locations. Three upland and five wetland community types (CT) were identified and mapped at the site in 2024 (Figure A-3, Appendix A). Vegetation communities were determined by species composition and dominance. Wetland Type 3 – *Alopecurus* spp. showed the largest community boundary shifts in 2024, with *Alopecurus* species receding and smooth brome (*Bromus inermis*) encroaching into the southwest and southeast edges of the wetland. Upland Type 8 – *Bromus inermis/Alopecurus* spp. and Upland Type 17 – *Bromus inermis* replaced this lost area, continuing trends seen in 2023. The community composition for each community type is provided in full detail on the Wetland Mitigation Site Monitoring form (Appendix B), and community boundaries are shown in Figure A-3 (Appendix A).

The vegetation communities identified on site in 2024 include the following:

- Upland Type 8 Elymus repens / Pascopyrum smithii
- Upland Type 17 Bromus inermis
- Upland Type 18 Bromus inermis / Alopecurus spp.
- Wetland Type 3 Phalaris arundinacea
- Wetland / Open Water Type 5 Aquatic Macrophytes / Open Water
- Wetland Type 14 Agrostis capillaris / Phleum pratense
- Wetland Type 15 Typha latifolia / Eleocharis palustris
- Wetland Type 16 Alopecurus spp.

A notable shift in species cover and dominance due to the beaver dam on the adjoining MDT-owned Schrieber Lake property and resulting perennial surface water has been observed within Wetland Type 3 – *Phalaris arundinacea* since 2019. In 2024, inundation levels within Wetland Type 3 were an average of 2-2.5 feet, nearly the same as in 2023. Perennial inundation has continued to increase within this community since 2019, especially around Coyote Creek, the ditch adjacent to Highway 2, and between the excavated depressions. Reed canary grass still dominates, but large patches of the dense monoculture were absent, observed as dead, dying, or floating mats. There was increased cover by

native species, such as *Carex* spp., colonizing the open water areas created after 2019. Extended periods of flooding like those seen at Schrieber Meadows have been shown to reduce nonnative reed canary grass cover, germination, and rhizome production effectively (Jenkins et al. 2008; WRCGM 2009; Waggy 2010), which allows a greater diversity of native vegetation. The planned removal of the relic beaver dam at the outlet of Schrieber Lake to assist downstream water rights holders is expected to decrease surface water elevations between both MDT-owned mitigation sites in 2025.

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. Table 3 summarizes the data for T-1 from 2012 and 2020 through 2024. T-1 is 318 feet long and intersects Wetland Types 3 – *Phalaris arundinacea* and 5 – Aquatic Macrophytes/Open Water. Wetland Type 3 and Wetland/Open Water Type 5 accounted for 56.30 and 43.70 percent of the transect, respectively. Vegetative cover remained similar to 2023 at 45% cover. This transect has not intersected an upland area since 2010.

Table 3. Data Summary for T-1 From 2012 and 2021 through 2024 at the Schrieber Meadows Site

Monitoring Year	2012	2021	2022	2023	2024
Transect Length (feet)	318	318	318	318	318
Vegetation Community Transitions Along Transect	7	6	5	5	5
Vegetation Communities Along Transect	3	2	2	2	2
Hydrophytic Vegetation Communities Along Transect	2	1	1	1	1
Total Vegetative Species	32	7	7	12	12
Total Hydrophytic Species	22	7	7	12	12
Total Upland Species	10	0	0	0	0
Estimated % Total Vegetative Cover	75	45	40	45	45
Estimated % Unvegetated	25	55	60	55	55
% Transect Length Comprising Hydrophytic Vegetation Communities	62	34.3	34.3	56.3	56.3
% Transect Length Comprising Upland Vegetation Communities	13	0	0	0	0
% Transect Length Comprising Open Water with Aquatic Macrophytes	25	65.7	65.7	43.7	43.7

Data collected on T-2 (Wetland Mitigation Site Monitoring form, Appendix B) are summarized in Table 4. T-2 is 594 feet long and alternates between Wetland Type 3 – *Phalaris arundinacea*, Wetland Type 14 – *Agrostis capillaris/Phleum pratense*, Wetland Type 15 – *Typha latifolia/Eleocharis palustris*, Wetland Type 16 – *Alopecurus* spp., and Upland Type 17 – *Bromus inermis*. Hydrophytic vegetation communities comprised 80.6 percent of the transect. Total vegetative cover was estimated at 60 percent, a decrease of 5 percent from 2023.

Table 4. Data Summary for T-2 From 2012 and 2021 through 2024 at the Schrieber Meadows Site

Monitoring Year	2012	2021	2022	2023	2024
Transect Length (feet)	594	594	594	594	594
Vegetation Community Transitions Along Transect	16	8	8	8	8
Vegetation Communities Along Transect	3	4	4	5	5
Hydrophytic Vegetation Communities Along Transect	3	4	4	4	4
Total Vegetative Species	23	33	33	35	35
Total Hydrophytic Species	17	30	30	30	30
Total Upland Species	9	3	3	5	5
Estimated % Total Vegetative Cover	60	65	65	65	60

Monitoring Year	2012	2021	2022	2023	2024
Transect Length (feet)	594	594	594	594	594
Estimated % Unvegetated	40	35	35	35	40
% Transect Length Comprising Hydrophytic Vegetation Communities	59	100	100	80.6	80.6
% Transect Length Comprising Upland Vegetation Communities	0	0	0	19.4	19.4
% Transect Length Comprising Open Water with Aquatic Macrophytes	40.9	0	0	0	0
% Transect Length Comprising Mudflat	0	0	0	0	0

T-3 begins near constructed wetland Cell 8 along the Middle Coyote Creek reach and extends east 440 feet to the edge of the former Coyote Creek channel along the eastern site boundary. The data recorded on T-3 (Wetland Mitigation Site Monitoring form, Appendix B) are summarized in Table 5. The transect intervals alternated between Wetland Types 3 – *Phalaris arundinacea* and 5 – Aquatic macrophytes/ Open Water. Wetland Type 3 and Wetland/Open Water Type 5 accounted for 79 and 21 percent of the transect, respectively, in 2024.

Table 5. Data Summary for T-3 From 2012 and 2021 through 2024 at the Schrieber Meadows Site

Monitoring Year	2012	2021	2022	2023	2024
Transect Length (feet)	440	440	440	440	440
Vegetation Community Transitions Along Transect	4	4	4	2	2
Vegetation Communities Along Transect	2	2	2	2	2
Hydrophytic Vegetation Communities Along Transect	2	2	1	1	1
Total Vegetative Species	9	9	9	9	9
Total Hydrophytic Species	7	9	9	9	9
Total Upland Species	2	0	0	0	0
Estimated % Total Vegetative Cover	50	50	45	55	55
Estimated % Unvegetated	50	50	55	45	45
% Transect Length Comprising Hydrophytic Vegetation Communities	53	52.5	49.5	79	79
% Transect Length Comprising Upland Vegetation Communities	0	0	0	0	0
% Transect Length Comprising Open Water with Aquatic Macrophytes	47	47.5	50.5	21	21

Weeds - During the July 2024 monitoring event, 82 occurrences of Priority 2B noxious weed species were mapped at the site, including Canada thistle (*Cirsium arvense*), spotted knapweed (*Centaurea stoebe*) and ox-eye daisy (*Leucanthemum vulgare*). Three occurrences of orange hawkweed (*Hieracium aurantiacum*), a Priority 2A noxious weed in Montana, were also mapped. Noxious weed infestations occurred in patches less than 0.1 acre in size and were present in wetland and upland habitats (Figure A-3, Appendix A). Most noxious weed infestations were found north of the access road. Spotted knapweed was mapped along the highway outside of the project boundary, and at one location inside the southwest project boundary, for the first time in 2024. Canada thistle continues to be the most prominent weed within the site and increased in number of occurrences south of the access road in 2024. Overall, noxious weed cover across the site was estimated to be below five percent in 2024. The Montana Department of Transportation has an ongoing weed-control program, which will continue in 2025.

**Plantings** - A total of 1,000 speckled alders (*Alnus incana*) and 750 willows (*Salix* spp.) were planted along the newly constructed stream channel and wetland cells in the northern third of the site. In 2024, 37 live plants were observed across the mitigation site, indicating approximately two percent survival.

No willow (*Salix* spp.) plantings were observed during the 2024 monitoring event. The 37 surviving speckled alder plantings appeared stunted and had poor vigor due to aggressive competition from reed canary grass and perennial deepwater conditions. Balsam poplar (*Populus balsamifera*) volunteers were observed growing around the edges of some excavated wetland cells in the project area north of the access road, along with speckled alder and one Bebb's willow (*Salix bebbiana*) volunteer.

**Hydrology** – During the 2024 investigation approximately 65% of the site was inundated. Open water accounted for 5.81 acres. All excavated wetland cells contained surface water or were saturated to the soil surface. The average surface water depth within the inundated vegetated areas was estimated at 1.5 feet, with a range of depths from 0 to 5 feet, necessitating the use of kayaks in some areas to complete the 2024 monitoring. The surface-water depth at the emergent vegetation and open-water boundary was estimated at two feet, the same as in 2023. The deepest standing water is located within excavated cells south of the access road, within Coyote Creek, and in the former Coyote Creek channel along the east project boundary.

A high groundwater table is the primary water source across the site. The inundation and high surface water elevations observed in the southern two-thirds of the site result from past restoration efforts to plug existing drainage ditches and channels, and the subsidence of histosol soil elevations over time. Wetland acreage north of the access road remained stable in 2024, although it has seen fluctuations in previous years with differences in precipitation. The fluctuations indicate the wetlands in this area are seasonal and rely on precipitation more than those in the southern two-thirds of the site. Precipitation accumulation for this area in 2024 was 11.01 inches from January through July, significantly more than the 7.36 inches reported for the same period in 2023 and more than the historical average of 9.35 inches (NRCS 2024).

The upper portion of the Coyote Creek channel was dry in July 2024, which is expected for an ephemeral stream channel located above its main hydrologic source, a spring just upstream of the site's access road. The spring provides the primary perennial source of hydrology to Coyote Creek downstream of this location.

**Soils** – Paired soil test pits were excavated at ten locations to evaluate the extent of hydric soil development across the site in 2024 (Appendices A and B). Soil textures within wetland test pits ranged from peat to loamy sand. Hydric soil indicators observed in wetland test pits included histosol, histic epipedon, redox dark surface, depleted below dark surface, hydrogen sulfide, and depleted matrix. Soil textures within upland test pits ranged from sandy loams to silt loams. No hydric soil indicators were observed at upland soil pits.

**Photographs** – A total of 20 photo points were established in 2011 and 2012. In addition to established photo points, photographs were taken at each surveyed stream cross-section, sampled data points, and vegetation transect endpoints. Photo point locations are illustrated in Figure A-2 (Appendix A) and photo point photographs comparing 2011 and 2024 site conditions are located in Appendix C. Please refer to previous years' Schrieber Meadows Mitigation monitoring reports on the MDT website for all previous annual photographs: (<a href="https://www.mdt.mt.gov/publications/brochures/wetland-mitigation.aspx">https://www.mdt.mt.gov/publications/brochures/wetland-mitigation.aspx</a>).

**Functional Assessment** – The 2008 MDT Montana Wetland Assessment Method (MWAM) functional assessment results for 2024 are summarized in Table 6. Three separate Assessment Areas (AAs) were used to evaluate the site: Creation AA, Enhancement AA, and Restoration AA. Completed functional assessment forms for all three AAs are provided in Appendix B. All wetlands within the Schrieber Meadows site rate as Category I wetlands. Functional scores and ratings have remained nearly constant since 2015. All AAs received high or exceptional ratings for many assessment parameters, including Listed/Proposed Threatened & Endangered Species Habitat due to the documentation of grizzly bears on the site in recent years. Other high and/or exceptional functions include General Wildlife Habitat, Short- and Long-Term Surface Water Storage, Sediment/Nutrient/Toxicant Removal,

Sediment/Shoreline Stabilization, Production Export/Food Chain Support, and Groundwater Discharge/Recharge.

Table 6. 2024 Montana Wetland Assessment Method Summary for Schrieber Meadows Site

Function and Value Parameters From the 2008 Montana Wetland Assessment Method	2024 Enhancement AA	2024 Creation AA	2024 Restoration AA
Listed/Proposed Threatened & Endangered (T&E) Species Habitat	High (0.8)	High (0.8)	High (0.8)
Montana Natural Heritage Program Species (MTNHP) Habitat	High (0.9)	High (0.9)	High (0.9)
General Wildlife Habitat	Exc (1.0)	Exc (1.0)	Exc (1.0)
General Fish/Aquatic Habitat	Low (0.2)	Mod (0.6)	NA
Flood Attenuation	Mod (0.5)	Mod (0.5)	Mod (0.5)
Short- and Long-Term, Surface-Water Storage	High (1.0)	High (1.0)	High (0.8)
Sediment/Nutrient/Toxicant Removal	High (1.0)	High (0.9)	Mod (0.6)
Sediment/Shoreline Stabilization	High (1.0)	High (1.0)	High (1.0)
Production Export/Food Chain Support	High (0.9)	Exc (1.0)	Exc (1.0)
Groundwater Discharge/Recharge	High (1.0)	High (1.0)	High (1.0)
Uniqueness	Mod (0.4)	Mod (0.4)	Mod (0.4)
Recreation/Education Potential (bonus points)	High (0.2)	High (0.2)	High (0.2)
Actual Points/Possible Points	8.9/11	9.3/11	8.2/10
% of Possible Score Achieved	81%	85%	82%
Overall Category	I	I	I

**Wildlife** – Ten bird species were identified in 2024. Herptile observations included Columbia spotted frogs (*Rana luteiventris*) within many of the excavated wetland cells. Mammal observations at the site included white-tailed deer (*Odocoileus virginianus*), voles (*Microtus* spp.), and one female moose (*Alces alces*). Unidentified fish species were also observed in 2024.

**Stream Monitoring** – The survey results for 11 permanent cross-sections established along the constructed Coyote Creek (Figure A-2, Appendix A) are shown in Appendix D. The 2024 data was compared to the previous surveys to assess stream channel stability. Generally, the constructed channel's banks were well-vegetated and exhibited stable conditions. Coyote Creek does not generally experience high-power flows and no major channel morphological changes (i.e. channel migration, aggradation or degradation) have been observed throughout the monitoring years.

The stream channel at XS 1 and XS 2 on upper Coyote Creek has been dry during all monitoring visits since 2012. At all other cross sections water levels have averaged around 2 feet deep across all monitoring years, with the water level in 2024 about 0.25 ft lower than seen in 2023.

#### **Credit Summaries**

**Stream Credits** - Completely restoring sinuosity and stream length to Coyote Creek was intended to create a new channel length of approximately 7,756 linear feet, which is an overall increase of 3,327 linear feet from the previously channelized length of 4,429 linear feet. As part of the Montana Stream Mitigation Procedure (USACE, 2010), riparian and stream credits are added together to calculate the total stream mitigation credits (Table 7). Riparian mitigation credit calculations can be found in Table 3-10 of the 2018 Monitoring Report.

Table 7. Determination of Stream Mitigation Credits for the Schrieber Meadows Site

Factors	Upper Coyote Creek (USFS)	Coyote Creek Spring Area	Middle Coyote Creek (MDT)	Perennial Spring Channel	Lower Coyote Creek <sup>(b)</sup>		
Net Improvement	2.50	0.00	2.50	2.50	2.50		
Stream Status	0.05	0.05	0.05	0.05	0.05		
Type of Protection	0.20	0.20	0.20	0.20	0.20		
Mitigation Timing	0.10	0.10	0.10	0.10	0.10		
Comparative Stream Order	0.20	0.20	0.20	0.20	0.20		
Location	0.10	0.10	0.10	0.10	0.10		
Sum of Factors (M)	3.15	0.65	3.15	3.15	3.15		
Linear Feet (L)	1,752	190	3,179	400	2,425		
Total Stream Credits (M × L)	5,519	123	10,014	1,260	7,639		
Total Stream Credits <sup>(a)</sup> = 24,555							
Total Mitigation Credits (Riparian -	+ Stream) = 10,9	96 + 24,555 =	35,551				

- (a) Credits were calculated using the Montana Stream Mitigation Procedure [USACE, 2010].
- (b) Lower Coyote Creek was formerly merged Coyote/Schrieber Creek channel in original mitigation plan and was split following implementation of the adjacent Schrieber Lake mitigation project.

Wetland Credits - The pilot project, constructed in 2007, generated approximately 3.72 mitigation credit acres, including 2.38 credit acres of wetland creation, 0.75 credit acre for restoration (rehabilitation) of existing wetlands (1.12 acres restored), and 0.59 credit acre of upland buffer (2.96 acres maintained) around the wetlands. The pilot project was integrated into the larger Schrieber Meadows mitigation project constructed in 2011. Table 8 provides the credits generated at the Schrieber Meadows site for the approximately 60-acre, full-scale project and incorporates the original pilot Schrieber Meadows mitigation project.

A total of 32.00 acres of wetland habitat were delineated at the Schrieber Meadows site in 2024, including 22.96 acres of creation, 2.25 acres of restoration, and 6.79 acres of enhancement (Table 8). A total of 47.58 acres, including 9.85 acres of upland buffer, -0.08 acres of project impacts, and 5.81 acres of open water, were used to calculate the mitigation credit acres. In accordance with the USACE-approved performance standard for this site, open water areas with submerged and/or floating vegetation will be considered successful and creditable. After applying the USACE-approved ratios to these values, a total of 28.62 mitigation credit acres have been estimated in 2024, which is 11.38 credit acres more than the targeted 17.24 credit acres originally planned for this site.

In 2024, MDT requested that all wetlands occurring within the Schrieber Meadows property be mapped up to the adjacent MDT Schrieber Lake property boundary, as wetlands that had expanded beyond the monitoring boundaries were not being captured by either monitoring site (Appendix A). These additional wetlands between the Schrieber Meadows and Schreiber Lake project boundaries were credited as creation wetlands and accounted for 0.86 acres of the 32.00 wetland acres delineated in 2024. Upland buffer that occurs on MDT property, but outside of the monitoring boundary, accounted for 3.29 acres of the 9.85 acre total.

Table 8. Summary of Wetland Mitigation Credits at the Schrieber Meadows Site from 2013 and 2023-2024

Mitigation Type	Total Proposed Acreage	Ratio	Proposed Credit Acres	2013 Delineated Acreage	2013 Credit Acres	2023 Delineated Acreage	2023 Credit Acres	2024 Delineated Acreage	2024 Credit Acres
Creation – USFS/MDT Property	8.91	1:1	8.91	22.43	22.43	23.44	23.44	22.96	22.96
Restoration on USFS/MDT Property	3.46	1.5:1	2.31	3.46	2.31	2.35	1.57	2.25	1.5
Enhancement of Wetlands Inside Geotechnical Limits Adjacent to US Highway 2 (MDT/USFS)	13.22	3:1	4.41	13.22	4.41	6.77	2.26	6.79	2.26
Upland Buffer <sup>a</sup>	8.50	5:1	1.70	12.39	2.48	6.65	1.33	9.85	1.97
Project Impacts	-0.08	None	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08	-0.08
Open Water <sup>b</sup>	N/A	TBD <sup>(b)</sup>	N/A			5.81	TBD <sup>(b)</sup>	5.81	TBD <sup>(b)</sup>
Total Mitigation Acreage	34.01		17.24	51.42	31.54	44.94	28.52	47.58	28.62

<sup>&</sup>lt;sup>a</sup> Acreage includes 50-foot buffer around wetlands within MDT and USFS property and outside of the riparian buffer.

**Functional Unit Crediting Summary** – The 2024 functional units generated by the Schrieber Meadows site are summarized in Table 9. A total of 245.1 functional units were generated at the Schrieber Meadows site after applying the appropriate mitigation ratios to the 2024 wetland acreage and multiplying that value by the points generated from each the three MWAM assessment areas.

**Table 9. Functional Unit Crediting Summary for Schrieber Meadows** 

Mitigation Type	2024 Delineated Acreage	Ratio	2024 Mitigation Credit Acres	MWAM Actual Points	Functional Units
Creation – USFS/MDT Property	22.96	1:1	22.96	9.3	213.53
Restoration on USFS/MDT Property	2.25	1.5:1	1.50	8.2	12.30
Enhancement of Wetlands Inside Geotechnical Limits Adjacent to US Highway 2 (MDT/USFS)	6.79	3:1	2.26	8.9	20.11
Upland Buffer*	9.85	5:1	1.97	TBD	-
Open Water*	5.81	TBD	TBD	TBD	_
Functional Units (Mitigation Credit Acres × Actual Points)					245.94

<sup>\*</sup> Mitigation crediting for Open Water and Upland Buffer acreages are To Be Determined (TBD).

<sup>&</sup>lt;sup>b</sup> Mitigation ratios and crediting for Open Water are To Be Determined (TBD).

#### **Conclusions**

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

- Riparian Buffer Success: Woody and riparian vegetation is established.
   Woody vegetation along the reconstructed stream channels has been slow to develop due to perennial deepwater conditions and aggressive competition from reed canary grass.
- 2. Planted trees and shrubs will be considered successful when they exhibit 50 percent survival after 5 years.
  - a. Woody planting survival is not expected to meet this performance standard.

#### Maps, Plans, Photos

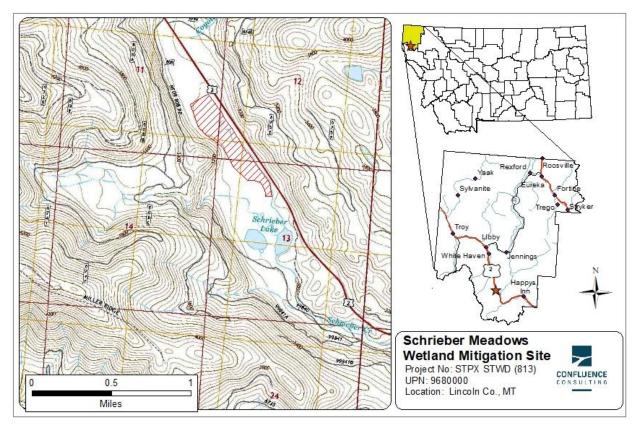


Figure 1. Site Location Map

**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 Delineation)

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

Photos: See Appendix C

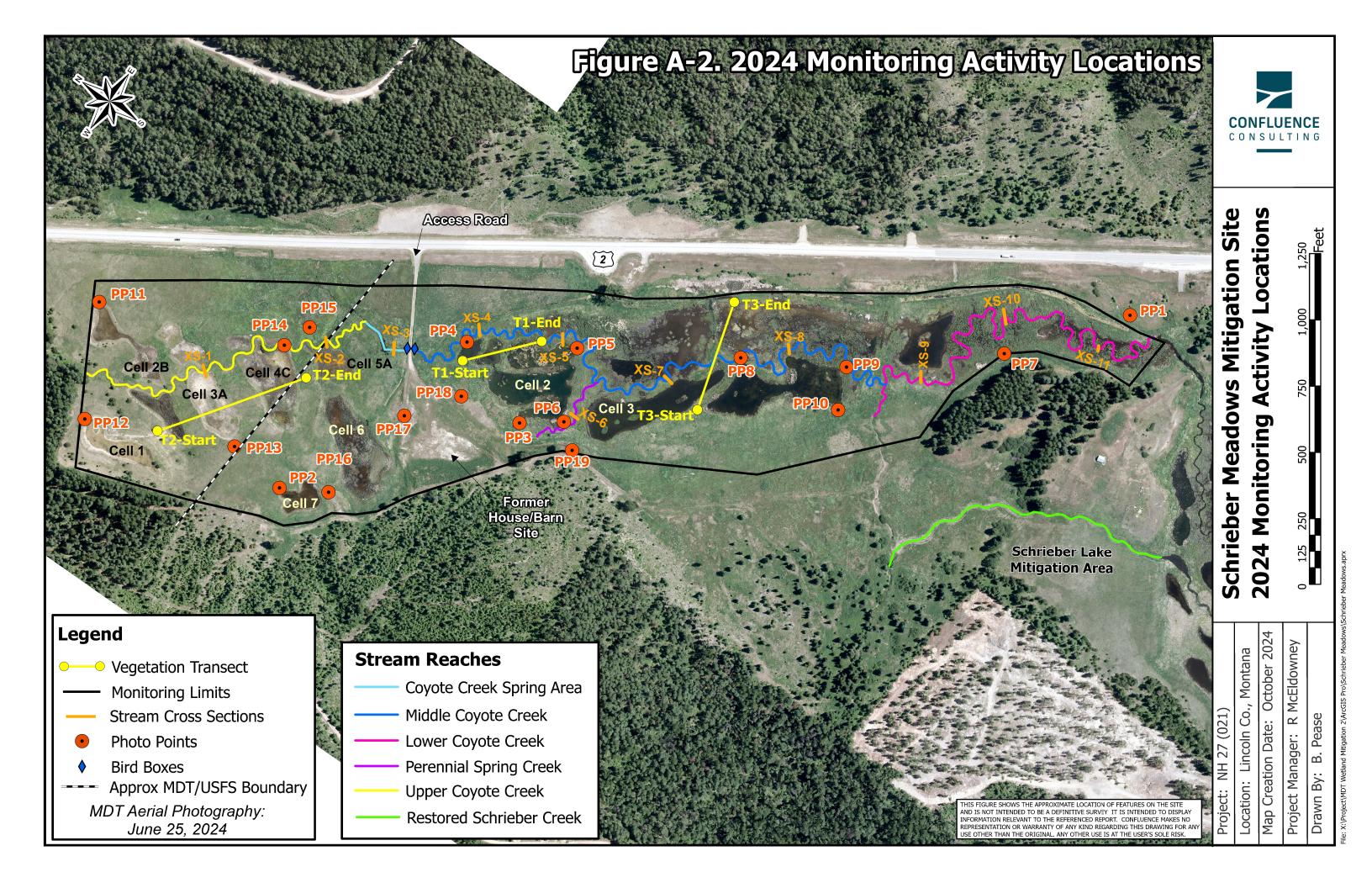
**Plans:** See Appendix D of the 2012 Schrieber Meadows Wetland Monitoring Report at this website link: https://www.mdt.mt.gov/publications/brochures/wetland-mitigation.aspx

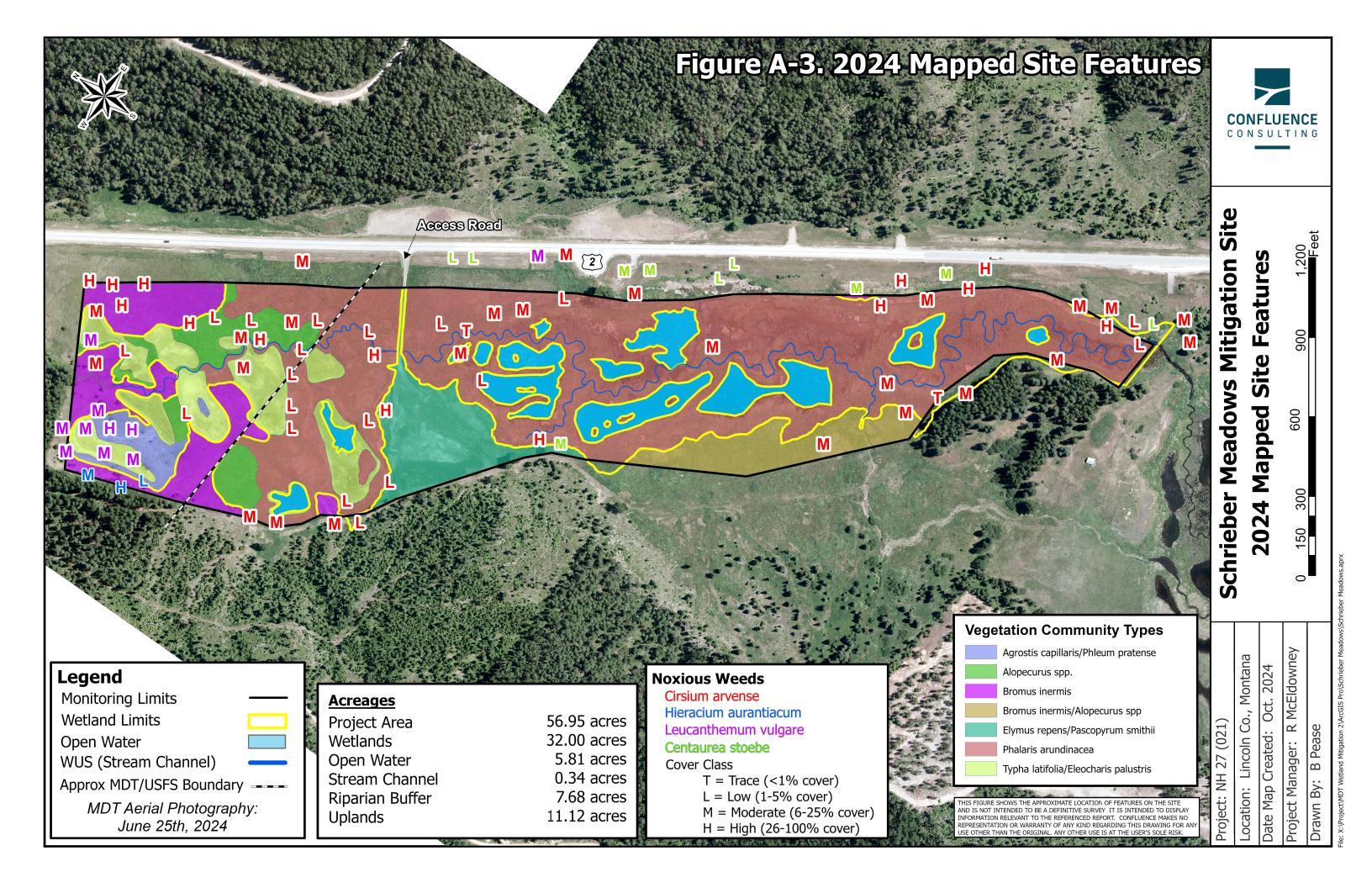
#### **References**

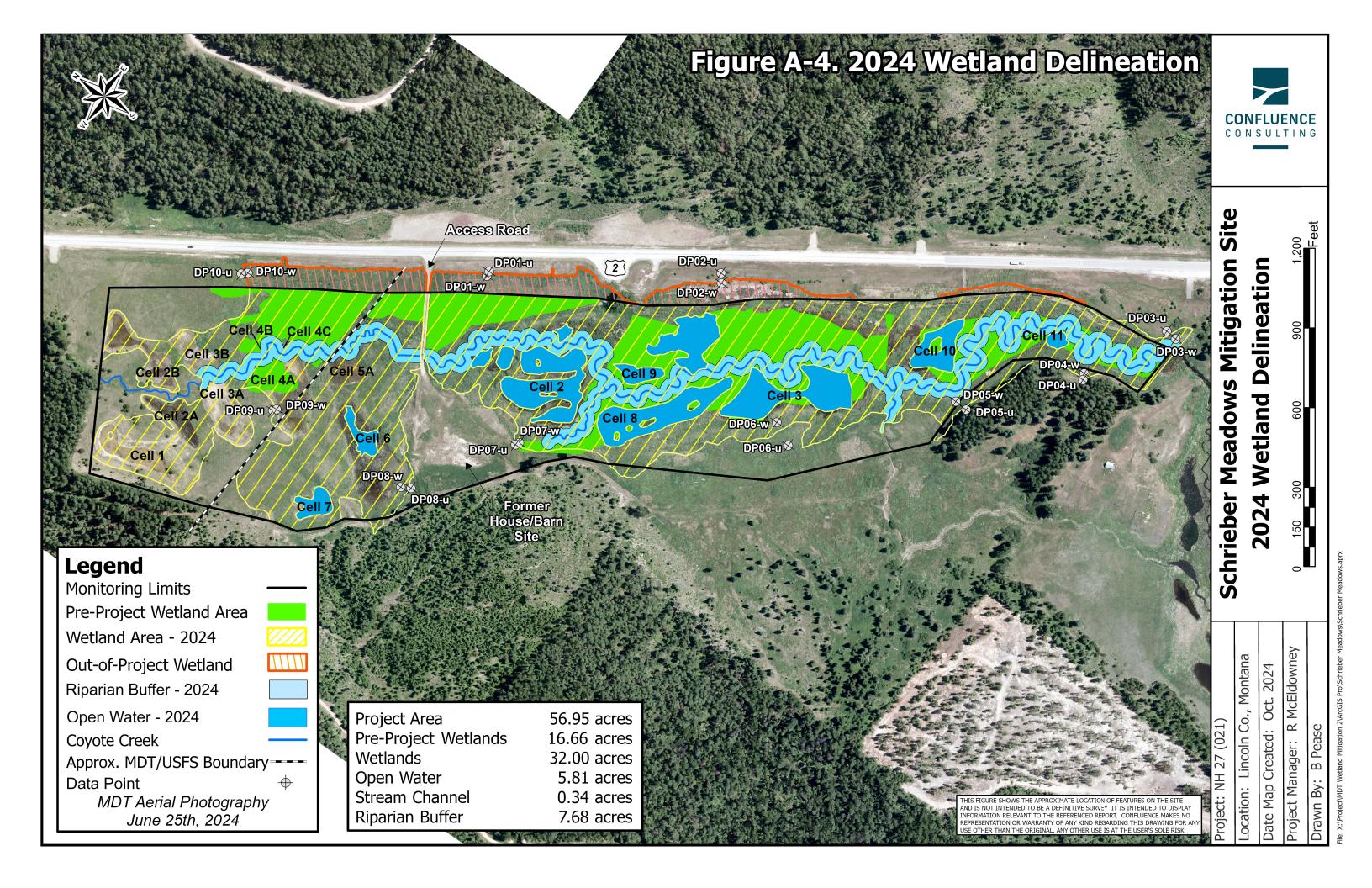
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# APPENDIX A PROJECT AREA MAPS

MDT Wetland Mitigation Monitoring Schrieber Meadows Lincoln County, Montana







# APPENDIX B MONITORING FORMS

MDT Wetland Mitigation Monitoring Schrieber Meadows Lincoln County, Montana

### MDT WETLAND MITIGATION SITE MONITORING FORM

Project Site: <u>Schrieber Meadows</u> Assessment Date/Time	<u>7/15/2</u> 02
Person(s) conducting the assessment: R. McEldowney, E. Reynaud, R. Baumgarten	
Weather: 85 degrees, partly cloudy, clear Location: Highway 2, Swamp Creek East	
MDT District: Missoula Milepost: 53.5	
Legal Description: T_27N_R30W_Section(s)_11, 12, 13	
Initial Evaluation Date: 8/29/2010 Monitoring Year: 14 #Visits in Year: 1	
Size of Evaluation Area: 57 (acres)	
Land use surrounding wetland: US Highway 2, US Forest Service, forested watershed	
HYDROLOGY	
Surface Water Source: Coyote Creek spring, Precipitation, Groundwater	
Inundation: Average Depth:1.5 (ft) Range of Depths:0-5 (ft)	
Percent of assessment area under inundation: 65 %	
Depth at emergent vegetation-open water boundary: 2 (ft)	
If assessment area is not inundated then are the soils saturated within 12 inches of surface: Yes	<u>;                                    </u>
Other evidence of hydrology on the site (ex. – drift lines, erosion, stained vegetation, etc <u>:</u>	
Surface water, saturation, high water table, oxidized rhizospheres on living roots, geomorphic position, and FAC neutral test.	
Groundwater Monitoring Wells	
Record depth of water surface below ground surface, in feet.	
Additional Activities Checklist:  Map emergent vegetation-open water boundary on aerial photograph.  Observe extent of surface water during each site visit and look for evidence of past surface water elevations (drift lines, erosion, vegetation staining, etc.)  Use GPS to survey groundwater monitoring well locations, if present.  Hydrology Notes:	
Water depths in 2024 were lower than in 2023 in the southern two thirds of the site, where excavated depressions and surrounding area had water depths ranging from 0.5-2 feet. Cells in the northern third of the site had lower water depths than 2023, with some cells being dry and others with water levels of up to 1 foot.	

#### **VEGETATION COMMUNITIES**

## Site Schrieber Meadows

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

Community # 3 Community Type: Phalaris arundinacea / Acres: 28.86

Species	Cover class	Species	Cover class
Alnus incana	0	Alopecurus arundinaceus	1
Alopecurus pratensis	1	Bare Ground	0
Calamagrostis canadensis	1	Carex athrostachya	1
Carex lasiocarpa	0	Carex nebrascensis	1
Carex stipata	1	Carex utriculata	1
Cirsium arvense	1	Eleocharis palustris	1
Epilobium brachycarpum	0	Epilobium ciliatum	1
Glyceria grandis	0	Juncus tenuis	0
Lemna minor	1	Mimulus guttatus	1
Open Water	3	Persicaria amphibia	1
Phalaris arundinacea	5	Scirpus microcarpus	1
0			

#### **Comments:**

Dominant wetland community type observed across the site. Water depths within the CT were 0.5-3 feet south of the access road and 0-1 feet north of the road. In 2024, within the perennially inundated areas where reed canary grass has been observed breaking up into floating mats in the past, more Carex spp. and other wetland obligate species were observed replacing the once dominant reed canary grass. This community shrank 1.22 acres in 2024 on its SW boundary with encroachment of the smooth brome/creeping foxtail CT 18.

Community # 5 Community Type: Aquatic macrophytes / Open Water Acres: 5.8

Species	Cover class	Species	Cover class
Algae, brown	2	Algae, green	2
Alnus incana	0	Aquatic macrophytes	2
Carex athrostachya	0	Carex nebrascensis	0
Carex utriculata	0	Chara sp.	2
Eleocharis palustris	0	Epilobium brachycarpum	0
Glyceria grandis	0	Lemna minor	0
Mimulus guttatus	0	Open Water	5
Persicaria amphibia	1	Phalaris arundinacea	1
Sparganium natans	0	Typha latifolia	1

#### Comments:

Areas dominated by an average of 2-5 feet of standing water, less than 5% emergent wetland vegetation, and a diversity of submergent/floating aquatic macrophytes.

Community #	<u>8</u>	<b>Community Type:</b>	Elymus repens / Pascopyrum smithii	Acres:	<u>3.9</u>
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Species	Cover class	Species	Cover class
Achillea millefolium	1	Alopecurus pratensis	1
Bare Ground	4	Bromus briziformis	1
romus inermis	1	Bromus tectorum	2
scurainia pinnata	1	Elymus repens	2
mus trachycaulus	2	Fragaria virginiana	0
edicago lupulina	2	Pascopyrum smithii	2
symbrium altissimum	1	Verbascum thapsus	1

#### **Comments:**

Upland community type that runs along the access road that bisects the property. This community appears to have been seeded with a native grass seed mix but also contains some non-native forbs.

Community # 14 Community Type: Agrostis capillaris / Phleum pratense Acres: 1.23

Species	Cover class	Species	Cover class
Agrostis capillaris	3	Agrostis stolonifera	1
Alopecurus pratensis	1	Bare Ground	1
Bromus inermis	2	Carex athrostachya	1
Cerastium arvense	1	Cirsium arvense	0
Dactylis glomerata	0	Equisetum arvense	0
Equisetum arvense	0	Festuca rubra	1
Hieracium aurantiacum	0	Juncus confusus	1
Juncus tenuis	1	Leucanthemum vulgare	2
Phalaris arundinacea	2	Phleum pratense	2
Picea engelmannii	0	Pinus contorta	0
Pinus ponderosa	0	Populus balsamifera	0
Prunella vulgaris	1	Pseudotsuga menziesii	0
Rosa woodsii	0	Schedonorus pratensis	1
Symphyotrichum spathulatum	0		

#### **Comments:**

Wetland community type located in northwest corner of site dominated by common bentgrass, timothy grass, and other non-native grasses and forbs.

Community # 15 Community Type: Typha latifolia / Eleocharis palustris Acres: 5.41

Species	Cover class	Species	Cover class
Achillea millefolium	0	Agrostis capillaris	1
Alisma triviale	1	Alnus incana	0
Alopecurus arundinaceus	1	Alopecurus pratensis	1
Arnica chamissonis	1	Bare Ground	5
Beckmannia syzigachne	0	Carex aquatilis	1
Carex athrostachya	1	Carex bebbii	0
Carex nebrascensis	0	Carex pellita	1
Carex stipata	1	Carex vesicaria	1
Chara sp.	1	Eleocharis palustris	2
Epilobium ciliatum	1	Glyceria grandis	1
Glyceria striata	1	Juncus bufonius	0
Juncus confusus	1	Juncus nodosus	1
Juncus tenuis	0	Leucanthemum vulgare	1
Mentha arvensis	1	Open Water	3
Persicaria amphibia	1	Phalaris arundinacea	1
Polypogon monspeliensis	0	Populus balsamifera	1
Potamogeton natans	1	Salix bebbiana	0
Scirpus cyperinus	0	Scirpus microcarpus	1
Trifolium pratense	1	Typha latifolia	4
Veronica scutellata	1		
_			

#### Comments:

Located in excavated depressions northwest of the access road that bisects the property. Surface water depths ranged from 0-1 feet in 2024 and many of the excavated cells were completely dry. Volunteer Populus balsamifera and Alnus incana seedlings were first observed around margins of depressions in 2023. Populus balsamifera cover increased in 2024.

Community # 16 Community Type: Alopecurus spp. / Acres: 2.77

Species	Cover class	Species	Cover class
Agrostis capillaris	1	Alopecurus arundinaceus	4
Alopecurus pratensis	2	Arnica chamissonis	1
Bromus inermis	1	Carex athrostachya	1
Cirsium arvense	1	Elymus lanceolatus	1
Elymus repens	2	Phalaris arundinacea	1
Poa palustris	1	Potentilla gracilis	1
Senecio hydrophiloides	1	Stellaria longipes	0

#### Comments:

This is a CT created in 2022 in the northern portion of the project area in areas that were newly classified as wetlands. These areas were formerly CT 9, a similar upland community, but lacked a significant Bromus inermis component. The CT decreased by 0.35 acres in 2024 due to encroachment of smooth brome and wetland boundary changes.

Community # 17 Community Type: Bromus inermis / Acres: 5.48

Species	Cover class	Species	Cover class
Achillea millefolium	1	Agropyron trachycaulum	2
Agrostis capillaris	2	Alopecurus arundinaceus	2
Alopecurus pratensis	3	Arnica chamissonis	1
Bare Ground	0	Bromus carinatus	1
Bromus inermis	5	Cirsium arvense	1
Dactylis glomerata	1	Elymus repens	1
Mahonia repens	0	Penstemon confertus	1
Phalaris arundinacea	1	Phleum pratense	1
Poa pratensis	1	Senecio hydrophiloides	1
Taraxacum officinale	1		

#### **Comments:**

New upland community created in 2023 that largely replaced the Alopecurus spp./Bromus inermis CT. This CT is located in the northern portions of the project area where the area has repeatedly transitioned from wetlands to uplands and back again. It expanded slightly in 2024 where wetlands decreased in acreage on the NE boundary of the site.

Community # 18 Community Type: Bromus inermis / Alopecurus spp. Acres: 3.08

Species	Cover class	Species	Cover class
Agrostis capillaris	0	Alopecurus arundinaceus	2
Alopecurus pratensis	2	Bromus inermis	3
Carex microptera	1	Cirsium arvense	1
Elymus lanceolatus	2	Elymus repens	1
Phalaris arundinacea	2	Phleum pratense	0
Poa pratensis	2		

#### Comments:

This community type was created in 2023 to characterize vegetation in the uplands located in the southwest portion of the site which are significantly different than the uplands at the northern portion of the site. Its area increased by 0.94 acres in 2024 with a reduction of wetland boundaries.

Total Vegetation Community Acreage

56.53

### **VEGETATION TRANSECTS**

Schrieber Meadows		Date:7/15/2024	
Transect Number:	<u> </u>	mpass Direction from S	Start:
Interval Data:			
Ending Station	18 Community T	ype: Phalaris arundinacea /	
Species	Cover class	Species	Cover clas
Epilobium brachycarpum Phalaris arundinacea	1 5	Persicaria amphibia	
Ending Station	55 Community T	ype: Aquatic macrophytes / C	pen Water
Species	Cover class	Species	Cover clas
Algae, green	1	Alnus incana	
Epilobium brachycarpum	2	Lemna minor	
Mimulus guttatus	0	Open Water	:
Persicaria amphibia	1	Phalaris arundinacea	
Ending Station	80 Community T	ype: Phalaris arundinacea /	
Species	Cover class	Species	Cover clas
Cirsium arvense	2	Epilobium brachycarpur	n
Mimulus guttatus	1	Open Water	
Phalaris arundinacea	5		
Ending Station	155 Community T	ype: Aquatic macrophytes / C	pen Water
Species	Cover class	Species	Cover clas
Algae, brown	1	Aquatic macrophytes	
Lemna minor	0	Open Water	
Persicaria amphibia	1		
Ending Station	188 Community T	ype: Phalaris arundinacea /	
Species	Cover class	Species	Cover clas
	1	Carex aquatilis	
Alnus incana	<u>.</u>		
Alnus incana Lemna minor	1	Mimulus guttatus	
	· ·	•	

Ending Station	215 Community Type:	Aquatic macrophytes / Open	Water
Species	Cover class	Species	Cover class
Algae, brown	0	Algae, green	1
Aquatic macrophytes	2	Carex vesicaria	2
Epilobium brachycarpum	1	Lemna minor	1
Mimulus guttatus	1	Open Water	5
Persicaria amphibia	1	Phalaris arundinacea	1
Ending Station	318 Community Type:	Phalaris arundinacea /	
Species	Cover class	Species	Cover class
Epilobium brachycarpum	1	Glyceria grandis	1
Open Water	3	Phalaris arundinacea	4
Sparganium natans	1	Typha latifolia	3

## Transect Notes:

Open water covered most of the surface area in 2024 as it has in previous years. Water depths were similar to 2023 and ranged from 0.5 to 5 feet.

**Interval Data: Ending Station** Agrostis capillaris / Phleum pratense 35 Community Type: **Species** Cover class **Species** Cover class Agrostis capillaris 3 Antennaria microphylla 0 5 Bare Ground Bromus inermis 1 1 1 Carex microptera Cerastium spp. Equisetum arvense Juncus confusus 0 Juncus tenuis Leucanthemum vulgare 2 Phleum pratense Pinus spp. 1 Prunella vulgaris Schedonorus pratensis **Ending Station** Typha latifolia / Eleocharis palustris 105 Community Type: **Species** Cover class Cover class **Species** Agrostis stolonifera 0 Carex nebrascensis 1 3 1 Carex pellita Carex vesicaria Eleocharis palustris 1 Glyceria grandis 0 Juncus ensifolius 0 Juncus tenuis 1 Open Water 4 Phalaris arundinacea 1 Scirpus microcarpus 1 Typha latifolia **Ending Station** 168 Community Type: Alopecurus pratensis / **Species** Cover class **Species** Cover class Agrostis stolonifera 2 Alopecurus pratensis Arnica chamissonis Bromus inermis 0 2 1 Carex microptera Carex nebrascensis Carex vesicaria 1 Cerastium arvense Epilobium ciliatum Equisetum arvense 1 2 Leucanthemum vulgare Phalaris arundinacea Poa palustris Scirpus microcarpus **Ending Station** Typha latifolia / Eleocharis palustris 219 Community Type: **Species** Cover class Cover class **Species** Achillea millefolium 0 Agrostis capillaris 1 1 5 Alopecurus pratensis Bare Ground Carex nebrascensis 0 Eleocharis palustris 1 Epilobium ciliatum 1 Gnaphalium palustre 0 2 Leucanthemum vulgare 1 Juncus tenuis Phalaris arundinacea 1 Polypogon monspeliensis 0 Populus balsamifera Scirpus microcarpus Typha latifolia 3

2

**Transect Number:** 

100

**Compass Direction from Start:** 

Ending Station	250	Community Type:	Agrostis capillaris / Phleum pr	atense
Species		Cover class	Species	Cover class
Agrostis capillaris		1	Alopecurus pratensis	1
Bare Ground		2	Bromus inermis	5
Carex microptera		1	Fragaria virginiana	0
Leucanthemum vulgare		1	Penstemon confertus	1
Ending Station	295	Community Type:	Typha latifolia / Eleocharis pal	ustris
Species		Cover class	Species	Cover class
Achillea millefolium		0	Agrostis capillaris	1
Alopecurus arundinaceus		1	Arnica chamissonis	1
Bare Ground		4	Beckmannia syzigachne	0
Carex atherodes		1	Carex nebrascensis	0
Eleocharis palustris		3	Epilobium ciliatum	1
Gnaphalium palustre		0	Juncus tenuis	1
Leucanthemum vulgare		0	Phalaris arundinacea	1
Populus balsamifera		1	Rosa woodsii	1
Typha latifolia		3		
Ending Station	410	Community Type:	Bromus inermis /	
Species		Cover class	Species	Cover class
Agrostis capillaris		1	Alopecurus pratensis	4
Arnica chamissonis		0	Bare Ground	1
Bromus inermis		4	Carex microptera	1
Cerastium fontanum		0	Equisetum arvense	1
Geum macrophyllum		0	Gnaphalium palustre	0
Leucanthemum vulgare		1	Penstemon confertus	0
Potentilla gracilis		0	Rosa woodsii	0
Ending Station	562	Community Type:	Typha latifolia / Eleocharis pal	ustris
Species		Cover class	Species	Cover class
Agrostis capillaris		1	Alisma gramineum	0
Alnus incana		1	Alopecurus pratensis	1
Carex aquatilis		2	Carex nebrascensis	0
Carex pellita		1	Eleocharis palustris	2
Juncus nodosus		1	Open Water	2
Persicaria amphibia		0	Phalaris arundinacea	2
Salix bebbiana		0	Scirpus microcarpus	1
Typha latifolia		5		

594 Community Type:	Phalaris arundinacea /	
Cover class	Species	Cover class
1	Carex vesicaria	1
1	Epilobium ciliatum	1
0	Phalaris arundinacea	5
1		
	Cover class  1 1	Cover class Species  1 Carex vesicaria 1 Epilobium ciliatum

#### **Transect Notes:**

There were 2-3 feet of water observed in cells in 2024, an increase from 2023 levels. Populus balsamifera volunteer seedlings were observed growing around the margins of CT 15 along transect. The weed ox-eye daisy increased in cover along this transect in 2024, continuing a trend observed since 2022. Bare ground also increased in 2024.

Transect Number: 3 **Compass Direction from Start: Interval Data: Ending Station** 57 Community Type: Phalaris arundinacea / **Cover class Species Cover class Species** Epilobium ciliatum 2 0 Lemna minor 0 Open Water 2 Mimulus guttatus 2 Persicaria amphibia Phalaris arundinacea 5 1 Typha latifolia 1 Sparganium natans **Ending Station** 150 Community Type: Aquatic macrophytes / Open Water Cover class **Species Species** Cover class Aquatic macrophytes 3 Lemna minor 0 5 Open Water Persicaria amphibia 0 **Ending Station** Phalaris arundinacea / 440 Community Type: **Species** Cover class **Species** Cover class Algae, brown Carex utriculata Carex vesicaria 3 Eleocharis palustris 1 Epilobium ciliatum 2 Lemna minor 1 2 Open Water 4 Persicaria amphibia Phalaris arundinacea 4 Sparganium natans 2 Typha latifolia 2 **Transect Notes:** Cattails were observed for the first time in this transect in 2023.

#### PLANTED WOODY VEGETATION SURVIVAL

#### Schrieber Meadows

Planting Type	#Planted	#Alive Notes
Alnus incana	1000	37 Too wet, stunted, poor vigor, out-competed by reed canary grass
Salix sp.	750	0 Too wet and out-competed by reed canary grass

#### **Comments**

Planted shrubs are difficult to see at the site due to the dense cover of tall reed canary grass. It is thought that the majority of woody plantings have died because of perennial deep water conditions and aggressive competition from reed canary grass. Volunteer balsam poplar (Populus balsamifera) and grey alder (Alnus incana) seedlings were observed around the margins of excavated depressions in the northern third of the site. In addition, volunteer Woods' rose (Rosa woodsii) has been observed within upland areas at the site.

#### Schrieber Meadows

#### **WILDLIFE**

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

**Nesting Structure Comments:** 

Species	#Observed	Behavior	Habitat	
Red-Winged Blackbird	15			
Great Blue Heron	1			
N. Rough-Winged Swalld	ow Many			
Northern Flicker	1			
Mallard	6			
Canada Geese	15			
Common Yellow-Throat	1			
Swainson's Thrush	1			
Sora	1			
Sandhill Crane	2			
Bird Comments				
A diversity of bird species	were observe	d at the site in 2024.		

#### **BEHAVIOR CODES**

 $BP = One of a \underline{breeding pair BD} = \underline{Breeding display F} = \underline{Foraging FO} = \underline{Flyover L} = \underline{Loafing N} = \underline{Nesting}$ 

## **HABITAT** CODES

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

 $\mathbf{WM} = \mathbf{Wet} \; \mathbf{meadow} \; \mathbf{MA} = \mathbf{Marsh} \; \mathbf{US} = \mathbf{Unconsolidated} \; \mathbf{shore} \; \mathbf{MF} = \mathbf{Mud} \; \mathbf{Flat} \; \mathbf{OW} = \mathbf{Open} \; \mathbf{Water} \; \mathbf{VS} = \mathbf{VS} \; \mathbf{VS}$ 

## **Mammals and Herptiles**

## Species # Observed Tracks Scat Burrows Comments

White-tailed Deer	1	No	No	No	Buck
Columbia Spotted Frog	-	No	No	No	Many all over site.
Moose	1	No	No	No	Large female.
Vole	2	No	No	No	

## Wildlife Comments:

Many unidentified fish species observed in open water throughout the site.

#### Schrieber Meadows

#### **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
DP01-u	48.113582	-115.41599		Data point images
DP01-w	48.11357	-115.416065		Data point images
DP02-u	48.111715	-115.413741		Data point images
DP02-w	48.111645	-115.413856		Data point images
DP03-u	48.107773	-115.410076		Data point images
DP03-w	48.107652	-115.410081		Data point images
DP04-u	48.108127	-115.411478		Data point images
DP04-w	48.108161	-115.411388		Data point images
DP05-u	48.108865	-115.412975		Data point images
DP05-w	48.109002	-115.412979		Data point images
DP06-u	48.110051	-115.415142		Data point images
DP06-w	48.110294	-115.414976		Data point images
DP07-u	48.112238	-115.417798		Data point images
DP07-w	48.112219	-115.41774		Data point images
DP08-u	48.112788	-115.419336		Data point images
DP08-w	48.112877	-115.419425		Data point images
DP09-u	48.114399	-115.419762		Data point images
DP09-w	48.114377	-115.419712		Data point images
DP10-u	48.115547	-115.418438		Data point images
DP10-w	48.1155	-115.418366		Data point images
PP01	48.10804	-115.410172	270	Photo Point 1 (Pano)
PP02	48.113735	-115.420509	150	Photo Point 2
PP03	48.112183	-115.417503	90	Photo Point 3 (Pano)
PP04	48.113213	-115.416832	180	Photo Point 4 (Pano)
PP05	48.112614	-115.415977	300	Photo Point 5 (Pano)

PP06	48.11904	-115.417023	0	Photo Point 6 (Pano)
PP07	48.108813	-115.411923	0	Photo Point 7 (Pano)
PP08	48.11121	-115.414238	190	Photo Point 8 (Pano)
PP09	48.109997	-115.413765	280	Photo Point 9 (Pano)
PP10	48.109737	-115.414024	0	Photo Point 10 (Pano)
PP11	48.116409	-115.420021	190	Photo Point 11 (Pano)
PP12	48.115673	-115.421562	180	Photo Point 12 (Pano)
PP13	48.11422	-115.420403	280	Photo Point 13 (Pano)
PP14	48.114655	-115.41893	230	Photo Point 14 (Pano)
PP15	48.114323	-115.418449	180	Photo Point 15 (Pano)
PP16	48.113403	-115.420128	70	Photo Point 16 (Pano)
PP17	48.112938	-115.418388	270	Photo Point 17 (Pano)
PP18	48.1129	-115.417618	90	Photo Point 18
PP19	48.111553	-115.417084	10	Photo Point 19, Photo 1
PP-19	48.111553	-115.417084	100	Photo Point 19, Photo 2
PP-20	48.109493	-115.413918	100	Photo Point 20
T-1 end	48.112663	-115.41642	295	Transect 1 end
T-1 start	48.115204	-115.417503	115	Transect 1 start
T-2 end	48.114197	-115.418991	280	Transect 2 end
T-2 start	48.115204	-115.421013	100	Transect 2 start
T-3 end	48.111187	-115.413849	225	Transect 3 end
T-3 start	48.111134	-115.415642	45	Transect 3 start

## **Comments:**

#### Schrieber Meadows

#### ADDITIONAL ITEMS CHECKLIST

# Hydrology ✓ Map emergent vegetation/open water boundary on aerial photos. ✓ Observe extent of surface water. Look for evidence of past surface water elevations (e.g. drift lines, 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

- Map vegetation community boundaries
- ✓ Complete Vegetation Transects

#### Soils

✓ Assess soils

#### **Wetland Delineations**

- Delineate wetlands according to applicable USACE protocol (1987 form or Supplement)
- Delineate wetland upland boundary onto aerial photograph.

#### Wetland Delineation Comments

A total of 45.83 acres of jurisdictional wetland and waters of the US (WOTUS) were delineated at the Schrieber Meadows site in 2024. The total wetland acreage delineated in 2024 was 32.00 acres, which is a decrease of 0.65 acres since 2023. WUS (Open Water) was 5.81 acres in 2024, the same as in 2023.

#### **Functional Assessments**

☑ Complete and attach full MDT Montana Wetland Assessment Method field forms.

#### **Functional Assessment Comments:**

All 3 Assessment Areas are Category I wetlands.

#### Maintenance

Project/Site: Schrieber Meadows	roject/Site: Schrieber Meadows City/County: Linco						
Applicant/Owner: Montana Dept. of Transportation	n			State: Montana	Sampling Point: DP01u		
Investigator(s): R Baumgarten	5	Section, To	wnship, Rar	nge: S12 T27N R30W	<u></u>		
Landform (hillslope, terrace, etc.): Backslope				-			
			Datum: NAD 83				
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terrac		=					
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ır? Yes	✓ No_	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrologys	_				·		
Are Vegetation, Soil, or Hydrology n							
SUMMARY OF FINDINGS - Attach site map	showing	sampling	g point lo	ocations, transects	, important features, etc.		
Hydrophytic Vegetation Present? Yes N	lo						
Hydric Soil Present? Yes N	lo		e Sampled		🗸		
Wetland Hydrology Present? Yes N	lo	with	in a Wetlan	d? Yes	No		
Remarks:							
Upland data point near road.							
VEGETATION – Use scientific names of plan	its.						
Tree Stratum (Plot size: 30 ft r	Absolute	Dominant		Dominance Test work	sheet:		
1	% Cover			Number of Dominant Sp That Are OBL, FACW, of			
2				Total Number of Domin			
3				Species Across All Stra			
4				Percent of Dominant Sp	necies		
Sapling/Shrub Stratum (Plot size: 15 ft r )		= Total Co	ver	That Are OBL, FACW,			
1				Prevalence Index wor	ksheet:		
2.				Total % Cover of:			
3.				· ·	x 1 = 0		
4.				FACW species 0	$x = \frac{0}{30}$		
5				FAC species 10	x 3 = 30		
- 6:		= Total Co	ver		x 4 = 264		
Herb Stratum (Plot size: 5 ft r	F0		FAOU		x = 0 (A) 294 (B)		
Pascopyrum smithii     Festuca idahoensis	50 15		FACU		\		
3. Lotus corniculatus	10		FACU FAC	Prevalence Index			
4 Lactuca serriola	1		FACU	Hydrophytic Vegetation			
5.				1 - Rapid Test for F 2 - Dominance Tes			
6.				3 - Prevalence Inde			
7.					Adaptations <sup>1</sup> (Provide supporting		
8.					s or on a separate sheet)		
9.				5 - Wetland Non-Va	ascular Plants <sup>1</sup>		
10				Problematic Hydror	phytic Vegetation <sup>1</sup> (Explain)		
11					l and wetland hydrology must		
	<u>76                                    </u>	= Total Cov	⁄er	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 24		= Total Cov	el .				
Remarks:				L			
Vegetation dominated by FACU species	and did	not me	et any h	ydrophytic vege	tation indicators.		

Sampling Point: DP01u SOIL

Profile Des	cription: (Descri	be to the de	oth needed to docu	ment the i	ndicator	or confirn	n the absence	of indicators.)
Depth	Matri		Redo	x Feature				
(inches)	Color (moist)		Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-6	10YR 3/3	100					Loam	Gravel throughout.
-								
		· · · · · · · · · · · · · · · · · · ·	-					-
-								
-	•							
¹Type: C=C	Concentration D=I	Denletion RM	I=Reduced Matrix, C	S=Covered	d or Coate	nd Sand G	rains <sup>2</sup> l o	cation: PL=Pore Lining, M=Matrix.
			I LRRs, unless othe			a Garia Gi		ors for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy Redox (		,			m Muck (A10)
	pipedon (A2)		Stripped Matrix					d Parent Material (TF2)
	istic (A3)		Loamy Mucky		1) (except	MLRA 1)		y Shallow Dark Surface (TF12)
Hydroge	en Sulfide (A4)		Loamy Gleyed	Matrix (F2	2)		Oth	er (Explain in Remarks)
Deplete	d Below Dark Sur	face (A11)	Depleted Matri	x (F3)			_	
	ark Surface (A12)		Redox Dark Su	` '				ors of hydrophytic vegetation and
-	Mucky Mineral (S		Depleted Dark		7)			and hydrology must be present,
	Gleyed Matrix (S4		Redox Depress	sions (F8)			unles	ss disturbed or problematic.
_	Layer (if present	.):						
Type:								
	iches):						Hydric Soil	Present? Yes No
Remarks:								
Gravel t	hroughout	profile, ι	inable to dig	past 6	inche	s. No h	nydric soi	il indicators observed and
	very dry.	. ,	J	•			•	
oon was								
HYDROLO	)GY							
Wetland Hy	drology Indicate	rs:						
Primary Indi	cators (minimum	of one require	ed; check all that app	ly)			<u>Seco</u>	ndary Indicators (2 or more required)
Surface	Water (A1)		Water-Sta	ined Leav	es (B9) ( <b>e</b>	xcept	V	Vater-Stained Leaves (B9) (MLRA 1, 2,
High Wa	ater Table (A2)		MLRA	1, 2, 4A, a	and 4B)			4A, and 4B)
Saturati	on (A3)		Salt Crust	(B11)			[	Orainage Patterns (B10)
Water N	/larks (B1)		Aquatic In	vertebrate	s (B13)		[	Ory-Season Water Table (C2)
Sedime	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)		s	Saturation Visible on Aerial Imagery (C9)
Drift De	posits (B3)				_	_	ots (C3) C	Geomorphic Position (D2)
Algal Ma	at or Crust (B4)		Presence	of Reduce	ed Iron (C4	1)		Shallow Aquitard (D3)
	posits (B5)		Recent Iro					FAC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted o			1) ( <b>LRR A</b>		Raised Ant Mounds (D6) (LRR A)
	ion Vis ble on Aer			plain in Re	emarks)		F	rost-Heave Hummocks (D7)
	y Vegetated Cond	ave Surface	(B8)					
Field Obser								
Surface Wat	ter Present?		No Depth (in					
Water Table	Present?		No Depth (in					_
Saturation P		Yes	No Pepth (in	iches):		Wetl	and Hydrolog	y Present? Yes No
	pillary fringe) ecorded Data (stre	am galige m	onitoring well, aerial	photos pr	evious ins	nections)	if available:	
20001100 110	(3110	an gaago, n	.ctoring won, dorlar	p.10100, pr	- 11000 III0	, Journal,	available.	
Remarks:								
	_			_				
No evid	ence of we	tland hy	drology obse	rved.				

Project/Site: Schrieber Meadows	C	Sampling Date: 2024-07-16				
Applicant/Owner: Montana Dept. of Transportation	1			State: Montana	Sampling Point: DP01w	
Investigator(s): E Reynaud	stigator(s): E Reynaud Section, Township, Range: S12 T27N R3					
Landform (hillslope, terrace, etc.): Toeslope	I	Local relief	f (concave,	convex, none): Concav	<u>re</u> Slope (%): 2	
Subregion (LRR): E 43A	Lat: 48.1	113582		Long: -115.41599	Datum: NAD 83	
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terrace	s-Andic Dystro	ochrepts, glac	ial outwash terr	aces, complex NWI classific	cation: PEM1C	
Are climatic / hydrologic conditions on the site typical for this	time of yea	r? Yes	No_	(If no, explain in F	Remarks.)	
Are Vegetation, Soil, or Hydrology signature.	gnificantly d	listurbed?	Are "	Normal Circumstances"	present? Yes No	
Are Vegetation, Soil, or Hydrology na	aturally prob	olematic?	(If ne	eded, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS - Attach site map s	howing	samplin	g point l	ocations, transects	s, important features, etc.	
Wetland Hydrology Present? Yes No Remarks:		with	ne Sampled nin a Wetlar	nd? Yes	No	
Data point taken outside NE project b	ounda	ry tow	ards hig	ghway.		
VEGETATION – Use scientific names of plant	S.					
20 ft "	% Cover	Species?		Dominance Test worl Number of Dominant S That Are OBL, FACW,	Species	
2				Total Number of Domin Species Across All Stra	4	
4				Percent of Dominant S That Are OBL, FACW,		
Sapling/Shrub Stratum (Plot size: 15 ft r )  1				Prevalence Index wo	rksheet:	
2.				Total % Cover of:		
3.					x 1 = 0	
4				FAC species 0	x = 200 $x = 3 = 0$	
5				FAC species	$x = \frac{0}{x = 0}$	
Herb Stratum (Plot size: 5 ft r	·	= Total Co	over	· · · · · · · · · · · · · · · · · · ·	x 5 = 0	
1 Phalaris arundinacea	100	~	FACW	Column Totals: 100		
2.				Prevalence Index		
3.				Hydrophytic Vegetati		
4					Hydrophytic Vegetation	
5				v 2 - Dominance Te	• • •	
6				✓ 3 - Prevalence Ind	lex is ≤3.0 <sup>1</sup>	
7					Adaptations <sup>1</sup> (Provide supporting	
8					(s or on a separate sheet)	
9				5 - Wetland Non-V		
10					ophytic Vegetation <sup>1</sup> (Explain)	
11	100			be present, unless dist	oil and wetland hydrology must turbed or problematic.	
Woody Vine Stratum (Plot size:)	100 :	= Total Co	ver		<u> </u>	
1				Hydrophytic		
2.				Vegetation	<b>4</b>	
	=			Present? Ye	es No	
% Bare Ground in Herb Stratum 0  Remarks:						
		•-•	• • •			
Evidence of hydrophytic vegetation incluprevalence index less than or equal to 3.	•	ositive	rapid te	est, a positive doi	minance test, and a	

US Army Corps of Engineers

SOIL

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

Depth Matrix Redox Features

(inches) Color (maint) 9/4 Color (maint)

(inches)	Color (moist)	%		- / ! ! !	0/	T 1	1 - 2	<b>T</b>	D 1
	23/2-2/4			r (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
	OYR 2/1	100						Peat	
									<u> </u>
-									
		_	<del>-</del>						<del>-</del>
<del>_</del> _									_
<u> </u>									
-			_						
Type: C=Conc	entration, D=De	oletion RI	M=Reduce	d Matrix CS	=Covered	or Coate	d Sand Gr	aine <sup>2</sup> I	
	cators: (Applie						a Garia Gi		ators for Problematic Hydric Soils <sup>3</sup> :
_ Histosol (A1				ndy Redox (S		,			cm Muck (A10)
_ Histosof (A1	•			pped Matrix	•				led Parent Material (TF2)
Black Histic				amy Mucky N		(except	MLRA 1)		ery Shallow Dark Surface (TF12)
_ Hydrogen S	` '			amy Gleyed I		( I	,		other (Explain in Remarks)
	elow Dark Surface	ce (A11)		pleted Matrix				· <del></del>	, ,
_ Thick Dark S	Surface (A12)		Re	dox Dark Sui	face (F6)				ators of hydrophytic vegetation and
	ky Mineral (S1)			pleted Dark S		)			tland hydrology must be present,
	ed Matrix (S4)		Re	dox Depress	ons (F8)			un	less disturbed or problematic.
estrictive Laye	er (if present):								
Type:									
Depth (inches	s):							Hydric S	oil Present? Yes No
		Organ	ic mat	eriai arii	peat 1		e quai	mes so	il as a Histosol.
DROLOGY			ic mat	enar and	реас	Lextur	e quai	mes so	ii as a mistosoi.
/DROLOGY /etland Hydrol	,	:				textui	e quai		condary Indicators (2 or more required)
DROLOGY	ogy Indicators	:			· /)				
DROLOGY etland Hydrol	ogy Indicators rs (minimum of ter (A1)	:		all that apply Water-Stai	· /)	s (B9) ( <b>e</b> )			condary Indicators (2 or more required)
DROLOGY  etland Hydrol  rimary Indicato  _ Surface War	ogy Indicators rs (minimum of ter (A1) Table (A2)	:		all that apply Water-Stai	ned Leaves	s (B9) ( <b>e</b> )		<u>Se</u>	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
DROLOGY etland Hydrol imary Indicato Surface Wat High Water	ogy Indicators rs (minimum of ter (A1) Table (A2)	:		all that apply Water-Stai	/) ned Leaves I, <b>2, 4A, an</b> (B11)	s (B9) ( <b>e)</b> n <b>d 4B)</b>		<u>Se</u>	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
TDROLOGY  etland Hydrol  imary Indicato  Surface War  High Water  Saturation (A	rs (minimum of ter (A1) Table (A2) A3) s (B1)	:		all that apply Water-Stai MLRA	ned Leaves I, <b>2, 4A, an</b> (B11) rertebrates	s (B9) (exad 4B)		<u>Se</u>	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
TDROLOGY Tetland Hydrol Timary Indicato Surface Water High Water Saturation (A	logy Indicators rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2)	:		all that apply Water-Stai MLRA Salt Crust Aquatic Inv	ned Leaves I, <b>2, 4A, an</b> (B11) rertebrates Sulfide Odd	s (B9) ( <b>e) id 4B)</b> (B13) or (C1)	cept	<u>Ser</u>	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
'DROLOGY  'etland Hydrol rimary Indicato  _ Surface Wat  _ High Water  _ Saturation (,  _ Water Marks  _ Sediment Do	rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3)	:		all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen	ned Leaves I, 2, 4A, an (B11) rertebrates Sulfide Odo hizosphere	s (B9) ( <b>e) id 4B)</b> (B13) or (C1) es along l	ccept  Living Roo	<u>Ser</u>	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9
/DROLOGY /etland Hydrol rimary Indicato _ Surface War _ High Water _ Saturation ( _ Water Marks _ Sediment Do _ Drift Deposit	logy Indicators rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4)	:		all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen	ned Leaves I, 2, 4A, an (B11) rertebrates Sulfide Odo hizosphere of Reduced	s (B9) ( <b>e) id 4B)</b> (B13) or (C1) es along l Iron (C4	ccept  Living Roo )	<u>Ser</u>	Condary Indicators (2 or more required)  Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)
/DROLOGY /etland Hydrol rimary Indicato Surface War High Water Saturation (A Water Marks Sediment Do Drift Deposit Algal Mat or	logy Indicators rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4)	:		all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R	ned Leaves 1, 2, 4A, an (B11) rertebrates Sulfide Odo hizosphere of Reduced n Reduction	s (B9) (example) (B13) or (C1) es along I Iron (C4 n in Tilled	ccept  Living Roo ) I Soils (C6	Ser	Condary Indicators (2 or more required)  Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2)  Shallow Aquitard (D3)
TDROLOGY Tetland Hydrol Timary Indicato Surface Wat High Water Saturation (A Water Mark Sediment De Drift Deposit Algal Mat or Iron Deposit Surface Soil	logy Indicators rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) r Crust (B4) is (B5)	: one requir	ed; check	all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence o	ned Leaves 1, 2, 4A, and (B11) rertebrates Sulfide Odd hizosphere of Reduced in Reduction Stressed P	s (B9) (exad 4B)  (B13)  or (C1) es along laron (C4 en in Tilled	ccept  Living Roo ) I Soils (C6	Ser	Condary Indicators (2 or more required)  Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)
rDROLOGY retland Hydrol rimary Indicato Surface Wat High Water Saturation (A Water Marks Sediment Do Drift Deposit Algal Mat or Iron Deposit Surface Soil	logy Indicators rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6)	: one requir	ed; check	all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro	ned Leaves 1, 2, 4A, and (B11) rertebrates Sulfide Odd hizosphere of Reduced in Reduction Stressed P	s (B9) (exad 4B)  (B13)  or (C1) es along laron (C4 en in Tilled	ccept  Living Roo ) I Soils (C6	Ser	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
rDROLOGY rimary Indicato Surface War High Water Saturation ( Water Marks Sediment Do Drift Deposit Algal Mat or Iron Deposit Surface Soil Inundation \ Sparsely Ve	rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) c Crust (B4) ts (B5) l Cracks (B6) /is ble on Aerial egetated Concavons:	: one requir Imagery ( re Surface	ed; check	all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro Stunted or Other (Exp	ned Leaves 1, 2, 4A, an (B11) rertebrates Sulfide Odd hizosphere of Reduced n Reduction Stressed P lain in Rem	s (B9) (example) (B13) or (C1) es along l Iron (C4 in in Tilled Plants (D1 inarks)	ccept  Living Roo ) I Soils (C6	Ser	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
rimary Indicato Surface War High Water Saturation (A Vater Marks Sediment De Drift Deposit Algal Mat or Iron Deposit Surface Soil Inundation \ Sparsely Ve	logy Indicators rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) rs (B5) I Cracks (B6) /is ble on Aerial getated Concav ons:	: one requir Imagery ( re Surface	ed; check	all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro Stunted or Other (Exp	ned Leaves 1, 2, 4A, an (B11) rertebrates Sulfide Odo hizosphere of Reduced n Reductior Stressed P lain in Rem	s (B9) (exact the second secon	ccept  Living Roo ) I Soils (C6	Ser	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
rimary Indicato Surface Wat High Water Saturation ( Water Marks Sediment Do Drift Deposit Algal Mat or Iron Deposit Surface Soil Inundation \ Sparsely Ve ield Observati	logy Indicators rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) rs (B5) I Cracks (B6) /is ble on Aerial getated Concav ons:	: one requir Imagery ( re Surface	ed; check	all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro Stunted or Other (Exp	ned Leaves 1, 2, 4A, an (B11) rertebrates Sulfide Odo hizosphere of Reduced n Reductior Stressed P lain in Rem	s (B9) (exact the second secon	ccept  Living Roo ) I Soils (C6	Ser	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
/DROLOGY /etland Hydrol rimary Indicato     Surface Wat     High Water     Saturation (a     Water Marks     Sediment Do     Drift Deposit     Algal Mat or     Iron Deposit     Surface Soil     Inundation \     Sparsely Ve ield Observati urface Water Perel vater Table Presencludes capillal	logy Indicators rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) is (B5) I Cracks (B6) /is ble on Aerial egetated Concavons: resent? sent? ry fringe)	: one requir Imagery ( re Surface res res res	B7) (B8) V No V	all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro Stunted or Other (Exp	ned Leaves 1, 2, 4A, an (B11) rertebrates Sulfide Odo hizosphere of Reduced n Reductior Stressed P lain in Rem ches): ches):	s (B9) (exact 4B)  (B13)  or (C1)  es along L  Iron (C4  n in Tilled  Plants (D1  narks)	Living Roo ) I Soils (C6 I) (LRR A)	and Hydrolo	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
/DROLOGY /etland Hydrol rimary Indicato     Surface Wat     High Water     Saturation (a     Water Marks     Sediment Do     Drift Deposit     Algal Mat or     Iron Deposit     Surface Soil     Inundation \     Sparsely Ve ield Observati urface Water Perel vater Table Presencludes capillal	logy Indicators rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6) //is ble on Aerial getated Concav ons: resent?	: one requir Imagery ( re Surface res res res	B7) (B8) V No V	all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro Stunted or Other (Exp	ned Leaves 1, 2, 4A, an (B11) rertebrates Sulfide Odo hizosphere of Reduced n Reductior Stressed P lain in Rem ches): ches):	s (B9) (exact 4B)  (B13)  or (C1)  es along L  Iron (C4  n in Tilled  Plants (D1  narks)	Living Roo ) I Soils (C6 I) (LRR A)	and Hydrolo	condary Indicators (2 or more required)  Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
PROLOGY Vetland Hydrol rimary Indicato Surface War High Water Saturation (A Water Marks Sediment Do Drift Deposit Algal Mat or Iron Deposit Surface Soil Inundation \ Sparsely Veter Indicate Water Power Table Presencludes capillar rescribe Record	logy Indicators rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) is (B5) I Cracks (B6) /is ble on Aerial egetated Concavons: resent? sent? ry fringe)	: one requir Imagery ( re Surface res res res	B7) (B8) V No V	all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro Stunted or Other (Exp	ned Leaves 1, 2, 4A, an (B11) rertebrates Sulfide Odo hizosphere of Reduced n Reductior Stressed P lain in Rem ches): ches):	s (B9) (exact 4B)  (B13)  or (C1)  es along L  Iron (C4  n in Tilled  Plants (D1  narks)	Living Roo ) I Soils (C6 I) (LRR A)	and Hydrolo	condary Indicators (2 or more required)  Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)
Vetland Hydrol rimary Indicato Surface Wat High Water Saturation (A Water Marks Sediment Do Drift Deposit Algal Mat or Iron Deposit Surface Soil Inundation N Sparsely Vet ield Observati urface Water Pet vater Table Presencludes capillar lescribe Record	logy Indicators rs (minimum of ter (A1) Table (A2) A3) s (B1) eposits (B2) ts (B3) Crust (B4) ts (B5) I Cracks (B6) /is ble on Aerial getated Concavons: resent? ent? ry fringe) led Data (stream	: one requir Imagery ( re Surface Yes Yes Yes In gauge, r	B7)	all that apply Water-Stai MLRA Salt Crust Aquatic Inv Hydrogen Oxidized R Presence of Recent Iro Stunted or Other (Exp	ned Leaves 1, 2, 4A, and (B11) rertebrates Sulfide Odo hizosphere of Reduced n Reduction Stressed P lain in Rem ches): ches):	s (B9) (example) (B13) or (C1) es along to the line (C4) in in Tilled (Plants (D1) inarks)	Living Roo ) I Soils (C6 I) (LRR A)  Wetla	ts (C3) v	condary Indicators (2 or more required)  Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9  Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)  Frost-Heave Hummocks (D7)

Project/Site: Schrieber Meadows	t/Site: Schrieber Meadows City/County: Linco						
Applicant/Owner: Montana Dept. of Transportati	Applicant/Owner: Montana Dept. of Transportation						
Investigator(s): R Baumgarten		Section, To	wnship, Ra	nge: S12 T27N R30W			
Landform (hillslope, terrace, etc.): Shoulder							
		Long: -115.413741 Datum: NAD 83					
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine ter							
Are climatic / hydrologic conditions on the site typical for t				<u> </u>			
Are Vegetation, Soil, or Hydrology							
Are Vegetation, Soil, or Hydrology				eeded, explain any answers in Remarks.)			
				ocations, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes	No 🔽						
Hydric Soil Present? Yes	No		e Sampled				
Wetland Hydrology Present? Yes	No	with	in a Wetlar	nd? Yes No V			
Remarks:							
Upland data point near road, offset from wetlan	nd point furt	ther than	normal di	ue to potential underground power line in area.			
VEGETATION – Use scientific names of pla	ants.						
Tree Stratum (Plot size: 30 ft r	Absolute % Cover			Dominance Test worksheet:			
1. Populus balsamifera			FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)			
2.							
3.				Total Number of Dominant Species Across All Strata: 1 (B)			
4.							
45.6	2	= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)			
Sapling/Shrub Stratum (Plot size: 15 ft r )	4		EAO	Prevalence Index worksheet:			
1. Populus balsamifera			FAC	Total % Cover of: Multiply by:			
2				OBL species 0 x 1 = 0			
3				FACW species <u>0</u> x 2 = <u>0</u>			
4				FAC species 6 x 3 = 18			
5	4	= Total Co		FACU species 60 x 4 = 240			
Herb Stratum (Plot size: 5 ft r )	<u> </u>	- Total Co	vei	UPL species 2 x 5 = 10			
1. Pascopyrum smithii	60		FACU	Column Totals: <u>68</u> (A) <u>268</u> (B)			
2. Unidentified forb	5			Prevalence Index = B/A = 3.94			
3. Bromus carinatus	2		UPL	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 data in Remarks or on a separate sheet)			
8				5 - Wetland Non-Vascular Plants <sup>1</sup>			
9				Problematic Hydrophytic Vegetation¹ (Explain)			
10 11				¹Indicators of hydric soil and wetland hydrology must			
11.	07	= Total Cov	/er	be present, unless disturbed or problematic.			
Woody Vine Stratum (Plot size:)		10101 001	<b>7</b> C1				
1				Hydrophytic			
2				Vegetation Present? Yes No			
% Bare Ground in Herb Stratum 33		= Total Cov	ver .	165 NO			
Remarks:							
Vegetation dominated by FACU specie	es and did	not me	et any h	nydrophytic vegetation indicators.			

SOIL Sampling Point: DP02u

Profile Desc	iption: (Describe	to the dep	th needed to docur	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	3			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 10	10YR 3/2	100					Sandy Loam	Gravelly.
-								
								-
-								
			Reduced Matrix, CS			d Sand Gr		cation: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators: (Applic	able to all	LRRs, unless othe	rwise note	ed.)		Indicato	ors for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Redox (				2 cr	m Muck (A10)
	pedon (A2)		Stripped Matrix					l Parent Material (TF2)
Black His			Loamy Mucky N	•		MLRA 1)		y Shallow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed		)		Oth	er (Explain in Remarks)
	Below Dark Surface	e (A11)	Depleted Matrix				3	
	rk Surface (A12)		Redox Dark Su	, ,	7)			ors of hydrophytic vegetation and
	ucky Mineral (S1) eyed Matrix (S4)		Depleted Dark   Redox Depress		7)			and hydrology must be present, as disturbed or problematic.
	ayer (if present):		Redox Depless	ions (Fo)			T	is disturbed or problematic.
	ayer (ii present).							
Type:								5 10 V
Depth (inc	nes):						Hydric Soil	Present? Yes No
Remarks:								
nches.								
IYDROLO(								
	rology Indicators							
	•	one required	d; check all that appl					ndary Indicators (2 or more required)
	Vater (A1)		Water-Sta	ined Leave	es (B9) ( <b>e</b> :	cept	V	Vater-Stained Leaves (B9) (MLRA 1, 2,
High Wat	er Table (A2)		MLRA	1, 2, 4A, a	nd 4B)			4A, and 4B)
Saturatio	n (A3)		Salt Crust	(B11)			D	Prainage Patterns (B10)
Water Ma	arks (B1)		Aquatic In	vertebrate	s (B13)		0	Ory-Season Water Table (C2)
Sedimen	t Deposits (B2)		Hydrogen	Sulfide Oc	lor (C1)		s	Saturation Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)		Oxidized F	Rhizosphei	es along	Living Roc	ots (C3) G	Geomorphic Position (D2)
Algal Ma	or Crust (B4)		Presence	of Reduce	d Iron (C4	.)	S	shallow Aquitard (D3)
Iron Dep	osits (B5)		Recent Iro	n Reduction	on in Tilled	d Soils (Ce	6) F	AC-Neutral Test (D5)
Surface S	Soil Cracks (B6)		Stunted or	Stressed	Plants (D	1) (LRR A	) <u> </u>	Raised Ant Mounds (D6) (LRR A)
Inundatio	n Vis ble on Aerial	Imagery (B	7) Other (Exp	olain in Re	marks)		F	rost-Heave Hummocks (D7)
Sparsely	Vegetated Concav	e Surface (	38)					
Field Observ	ations:							
Surface Water	r Present?	/es	No V Depth (in	ches):				
Water Table I			No Pepth (in					
Saturation Pr	esent?		No Pepth (in				and Hydrolog	y Present? Yes No
(includes cap		מפוומה אי	onitoring well, aerial	nhotos n	avious inc	nections)	if available:	
Describe Kec	orucu Dala (Sirean	ı yauye, me	antoning well, aerial	priotos, pre	zvious IIIS	p <del>c</del> ului 18),	ıı avallable.	
D								
Remarks:								
No evide	nce of wetla	and hvo	Irology obse	rved.				

Project/Site: Schrieber Meadows		City/Coun	<sub>ity:</sub> Lincoln (	County	Sampling Date: 2024-07-16		
Applicant/Owner: Montana Dept. of Transportation  State: Montana Sampling Po							
Investigator(s): E Reynaud Section, Township, Range: S12 T27N R30W							
Landform (hillslope, terrace, etc.): Toeslope	-	Slope (%); 2					
Subregion (LRR): E 43A	•	, -					
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terrace				-			
Are climatic / hydrologic conditions on the site typical for this							
Are Vegetation, Soil, or Hydrology signs of the sign of the si							
Are Vegetation, Soil, or Hydrology na							
SUMMARY OF FINDINGS - Attach site map s	howing	sampli	ng point le	ocations, transects,	important features, etc.		
Hydrophytic Vegetation Present? Yes No	)						
	·		the Sampled				
Wetland Hydrology Present? Yes No	·	Wit	thin a Wetlan	id? Yes	No		
Remarks:							
Data point taken outside project bour	ndary t	oward	ds highw	ay.			
VEGETATION – Use scientific names of plant	S.						
	Absolute		nt Indicator	Dominance Test worksh	heet:		
			? Status	Number of Dominant Spe			
1				That Are OBL, FACW, or	FAC: 4 (A)		
2				Total Number of Dominar			
3				Species Across All Strata	(B)		
4			Cover	Percent of Dominant Spe That Are OBL, FACW, or	cies FAC: 100.00 (A/B)		
Sapling/Shrub Stratum (Plot size: 15 ft r				Prevalence Index works			
1. Alnus incana	10	-		Total % Cover of:			
2					x 1 = 35		
3				FACW species 30			
4					<sub>x 3 =</sub> 135		
5	10				x 4 = 0		
Herb Stratum (Plot size: 5 ft r )	10	= Total C	Cover	UPL species 0	x 5 = 0		
1. Poa pratensis	25	~	FAC	Column Totals: 110	(A) <u>230</u> (B)		
2. Carex aquatilis	20	~	OBL	Prevalence Index =	- P/A = 2 09		
3. Phalaris arundinacea	20	~	FACW	Hydrophytic Vegetation			
4. Carex nebrascensis	15		OBL	1 - Rapid Test for Hy			
5. Agrostis capillaris	15		FAC	✓ 2 - Dominance Test i	· · ·		
6. Geum macrophyllum	5		FAC	✓ 3 - Prevalence Index	is $\leq 3.0^{1}$		
7					aptations <sup>1</sup> (Provide supporting		
8	-				or on a separate sheet)		
9				5 - Wetland Non-Vas			
10					nytic Vegetation <sup>1</sup> (Explain)		
11.	100			be present, unless disturb	and wetland hydrology must bed or problematic.		
Woody Vine Stratum (Plot size:)	100	= Total C	over		•		
1				Hydrophytic			
2.				Vegetation	<b>v</b>		
			over	Present? Yes	No		
% Bare Ground in Herb Stratum 0  Remarks:							
	_						
Evidence of hydrophytic vegetation inclu	ıdes a p	ositiv	e domina	nce test and a pre	valence index less		
than or equal to 3.0.							

US Army Corps of Engineers

SOIL Sampling Point: DP02w

Profile Desc	ription: (Describe	to the dep	th needed to document th	e indicator or confirr	n the absence	of indicators.)
Depth (inches)	Color (moist)	%	Redox Feature Color (moist) %		Texture	Remarks
0 - 9	10YR 2/2	100	Odioi (moist) 70		Clay Loam	remans
9 - 16	10YR 5/1	100		<u> </u>	Sandy Loam	
3 10	10111 0/1				<u> </u>	
	-					
-						
-						
¹Type: C=Co	oncentration, D=Dep	oletion, RM	=Reduced Matrix, CS=Cove	ered or Coated Sand G	rains. <sup>2</sup> Loc	eation: PL=Pore Lining, M=Matrix.
			LRRs, unless otherwise r			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 His	` '		Loamy Mucky Mineral			Shallow Dark Surface (TF12)
	n Sulfide (A4)	o (A11)	Loamy Gleyed Matrix	(F2)	Othe	er (Explain in Remarks)
	l Below Dark Surfac ark Surface (A12)	e (ATT)	<ul><li>✓ Depleted Matrix (F3)</li><li>_ Redox Dark Surface (F</li></ul>	<del>-</del> 6)	3Indicato	rs of hydrophytic vegetation and
	lucky Mineral (S1)		Depleted Dark Surface	,		nd hydrology must be present,
	leyed Matrix (S4)		Redox Depressions (F			s disturbed or problematic.
	ayer (if present):		· · · · · · · · · · · · · · · · · · ·	·		·
Type:						
Depth (inc	ches):				Hydric Soil	Present? Yes No
Remarks:						
A deplet	ed matrix be	low a d	lark surface is ev	idence of hyd	ric soils.	
HYDROLO	GY					
	drology Indicators	<u> </u>				
-			d; check all that apply)		Secon	idary Indicators (2 or more required)
-	Water (A1)			aves (B9) (except		/ater-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)		MLRA 1, 2, 4			4A, and 4B)
✓ Saturation			Salt Crust (B11)	,	Di	rainage Patterns (B10)
· <del></del>	arks (B1)		Aquatic Invertebr	ates (B13)		ry-Season Water Table (C2)
	t Deposits (B2)		Hydrogen Sulfide			aturation Visible on Aerial Imagery (C9)
Drift Dep	oosits (B3)		Oxidized Rhizosp	heres along Living Ro	ots (C3) 🔽 G	eomorphic Position (D2)
Algal Ma	t or Crust (B4)		Presence of Red	uced Iron (C4)	SI	hallow Aquitard (D3)
Iron Dep	osits (B5)		Recent Iron Redu	ction in Tilled Soils (C	6) <u>🗸</u> FA	AC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted or Stress	ed Plants (D1) (LRR A	(A) Ra	aised Ant Mounds (D6) (LRR A)
Inundation	on Vis ble on Aerial	Imagery (B	7) Other (Explain in	Remarks)	Fr	rost-Heave Hummocks (D7)
Sparsely	Vegetated Concav	e Surface (	B8)			
Field Observ						
Surface Water			No Depth (inches):			
Water Table			No Depth (inches):			
Saturation Pr		/es	No Depth (inches):	7 Wet	land Hydrology	/ Present? Yes No
(includes cap Describe Red	oniary iringe) corded Data (strean	n gauge. m	onitoring well, aerial photos,	previous inspections).	if available:	
	(	33-,	<b>y</b> , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,		
Remarks:						
Indicato	ra of watland	م برما برما	نوه موليياهم بمنا	looturation a	o o mo o rmbia	a position and a positive
	rs of wetland utral test.	ı nyarc	nogy includes sol	i saturation, g	eomorpnic	c position, and a positive

Project/Site: Schrieber Meadows	(	City/County	Lincoln (	County	Sampling Date: 2024-07-16	
Applicant/Owner: Montana Dept. Of Transportatio	n			State: Montana	Sampling Point: DP03u	
Investigator(s): R McEldowney	;	Section, To	wnship, Rar	nge: S13 T27N R30W		
					Slope (%): <u>15</u>	
Subregion (LRR): E 43A	_ Lat: 48.	107773		Long: -115.410076 Datum: NAD 83		
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terrac	es-Andic Dystr	ochrepts, glaci	al outwash terra	aces, complex NWI classifica	tion: R5UBH	
Are climatic / hydrologic conditions on the site typical for this	s time of yea	ar? Yes	<b>✓</b> No _	(If no, explain in Re	marks.)	
Are Vegetation, Soil, or Hydrologys	ignificantly	disturbed?	Are "	Normal Circumstances" pr	esent? Yes No	
Are Vegetation, Soil, or Hydrologyn	aturally pro	blematic?	(If ne	eded, explain any answers	s in Remarks.)	
SUMMARY OF FINDINGS - Attach site map			g point k	ocations, transects,	important features, etc.	
Hydrophytic Vegetation Present? Yes N						
Hydric Soil Present? Yes N	o <u> </u>		e Sampled in a Wetlan		No	
Wetland Hydrology Present? Yes N	o <u> </u>	With	III a vvetiali	iu: 165	NO	
Remarks:	_	_				
Upland data point approximately 3 fe	eet abo	ve its w	retland	pair.		
VEGETATION – Use scientific names of plan	ts.					
Tree Stratum (Plot size: 30 ft r	Absolute	Dominant		Dominance Test works	heet:	
Tree Stratum (Plot size: 30 ft r )  1	% Cover			Number of Dominant Sp That Are OBL, FACW, o		
2.						
3.				Total Number of Domina Species Across All Strat	•	
4.						
45.64.0		= Total Co	ver	Percent of Dominant Sports That Are OBL, FACW, o		
Sapling/Shrub Stratum (Plot size: 15 ft r )	5	./	FACU	Prevalence Index work	sheet:	
1. Symphoricarpos albus				Total % Cover of:	Multiply by:	
2					x 1 = 0	
3				· · · · · · · · · · · · · · · · · · ·	x 2 = 0	
5.					x 3 = 6	
	5	= Total Co	ver	•	x 4 = <u>220</u>	
Herb Stratum (Plot size: 5 ft r )		•			x 5 = 0	
1. Pascopyrum smithii	50		FACU	Column Totals: 57	(A) <u>226</u> (B)	
2. Phleum pratense			FAC	Prevalence Index	= B/A = <u>3.96</u>	
3				Hydrophytic Vegetation		
4				1 - Rapid Test for H		
5				2 - Dominance Test		
6				3 - Prevalence Index		
7				data in Remarks	daptations <sup>1</sup> (Provide supporting or on a separate sheet)	
9.				5 - Wetland Non-Va		
10					hytic Vegetation¹ (Explain)	
11.					and wetland hydrology must	
	F0	= Total Cov	/er	be present, unless distu	bed or problematic.	
Woody Vine Stratum (Plot size:)						
1				Hydrophytic		
2				Vegetation Present? Yes	No <u>′</u>	
% Bare Ground in Herb Stratum 48		= Total Cov	er			
Remarks:				I		
Data point did not meet any hydroph	ytic ve	getatio	n indica	ators.		

SOIL Sampling Point: DP03u

Profile Desc	ription: (Describe	to the dept	h needed to docu	nent the i	ndicator	or confirm	the absence	of indicator	s.)		
Depth	Matrix			x Features	s						
(inches)	Color (moist)	%	Color (moist)		_Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks		
0 - 15	10YR 2/1	100					Sandy Loam	Gravelly.			
-											
<del></del>	-	<del></del> .									
-											
		<del></del> .									
		<del></del> .									
·											
<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 I	ndicators: (Applic	cable to all I	LRRs, unless othe	rwise note	ed.)		Indicato	rs for Probl	ematic Hydr	ic Soils <sup>3</sup> :	
Histosol	(A1)	,	Sandy Redox (	S5)			2 cn	n Muck (A10)	)		
	ipedon (A2)		Stripped Matrix					Parent Mate			
Black His	` '	,	Loamy Mucky I			MLRA 1)			rk Surface (T	F12)	
	n Sulfide (A4)		Loamy Gleyed		)		Oth	er (Explain in	Remarks)		
	Below Dark Surfac	ce (A11)	Depleted Matrix	. ,			3, ,, ,				
	rk Surface (A12)		Redox Dark Su	, ,	· <b>-</b> \				hytic vegetati		
	lucky Mineral (S1) leyed Matrix (S4)		Depleted Dark Redox Depress		7)				must be pre problemation		
	ayer (if present):		Redox Depless	10113 (1 0)			T	is disturbed t	n probleman	<del></del>	
	ayer (ii present).										
Type:	\·						Herdeia Cail	D	V	No. V	
	ches):						Hydric Soil	Present?	Yes	No	
Remarks:											
No hvdri	c soil indicat	tors obs	served.								
,											
HYDROLO	GY										
	drology Indicators:	-									
-			; check all that appl				Cooor	adam, Indiaat	oro (O or mor	o required)	
		one required			(DO) (-				ors (2 or mor		
	Water (A1)		Water-Sta			xcept	V			) (MLRA 1, 2,	
_	ter Table (A2)			1, 2, 4A, a	ind 4B)		4A, and 4B)				
Saturatio	, ,		Salt Crust		(5.46)		Drainage Patterns (B10)				
Water M			Aquatic In				Dry-Season Water Table (C2)				
	t Deposits (B2)		Hydrogen							I Imagery (C9)	
	osits (B3)		<del></del>		_	-	ots (C3) G	•	, ,		
_	t or Crust (B4)		Presence					hallow Aquita			
	osits (B5)		Recent Iro					AC-Neutral T			
	Soil Cracks (B6)		Stunted or			1) ( <b>LRR A</b> )			ounds (D6) ( <b>L</b>		
	on Vis ble on Aerial	• • •	, <u>—</u>	olain in Re	marks)		F	rost-Heave F	łummocks (D	17)	
Sparsely	Vegetated Concav	e Surface (E	38)								
Field Observ			_								
Surface Water	er Present?	/es N	No Depth (in	ches):							
Water Table	Present?	/es N	No 🔽 Depth (in	ches):							
Saturation Pr	resent?	/es N	No Depth (in	ches):		Wetla	and Hydrolog	y Present?	Yes	No 🔽	
(includes cap			20 2 11 2 1								
Describe Red	corded Data (stream	n gauge, mo	nitoring well, aerial	pnotos, pr	evious ins	spections),	ıt available:				
Remarks:											
No evide	ence of wetla	and hvd	rology obse	rved							
. 10 0 100	OI WOUL	ana ny u	. Sidgy obse	. v . u .							

Project/Site: Schrieber Meadows	ty: Lincoln	County Sampling Date: 2024-07-16		
Applicant/Owner: Montana Dept. Of Transportation		•		State: Montana Sampling Point: DP03w
Investigator(s): R McEldowney	;	Section, T	ownship, Ra	nge: S13 T27N R30W
Landform (hillslope, terrace, etc.): Floodplain		Local relie	ef (concave,	convex, none): Concave Slope (%): 0
Subregion (LRR): E 43A	Lat: 48.	107652		Long: -115.410081 Datum: NAD 83
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terra	ces-Andic Dystr	ochrepts, gla	icial outwash terr	aces, complex NWI classification: PEM1C
Are climatic / hydrologic conditions on the site typical for thi	is time of yea	ar? Yes_	✓ No_	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologys				_
Are Vegetation, Soil, or Hydrology r				eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	sampli	ng point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes N	lo			
	lo		the Sampled thin a Wetlar	
Wetland Hydrology Present? Yes N	lo			NO
Remarks:				
PEM, riverine data point adjacent to	lower re	eacn o	of Coyote	e Creek.
VEGETATION – Use scientific names of plan	ıts.			
Tree Stratum (Plot size: 30 ft r	Absolute % Cover		nt Indicator	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2.				
3.				Total Number of Dominant Species Across All Strata: 1 (B)
4				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total C	Cover	That Are OBL, FACW, or FAC: 100.00 (A/B)
1. Plot size: 13 111				Prevalence Index worksheet:
2.				Total % Cover of: Multiply by:
3.				OBL species $0 \times 1 = 0$
4.				FACW species $\frac{90}{0}$ $x = \frac{180}{0}$ FAC species $x = \frac{180}{0}$
5				FAC species $0$ $x 3 = 0$ FACU species $0$ $x 4 = 0$
Hoch Chatian (Distains 5 ft r		= Total C	cover	UPL species 0 x 5 = 0
Herb Stratum (Plot size: 5 ft r )  1. Phalaris arundinacea	90	<b>/</b>	FACW	Column Totals: 90 (A) 180 (B)
2.				Prevalence Index = B/A = 2.00
3.				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)  5 - Wetland Non-Vascular Plants <sup>1</sup>
9				Problematic Hydrophytic Vegetation¹ (Explain)
10.				¹Indicators of hydric soil and wetland hydrology must
11	90	= Total Co	over	be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)		- Total Ot	3401	
1				Hydrophytic
2				Vegetation Present? Yes No
% Bare Ground in Herb Stratum 10		= Total Co	over	165 <u></u>
Remarks:				
  Monoculture of reed canarygrass (Phala	aris arun	dinace	a). Evide	ence of hydrophytic vegetation includes

a positive rapid test, dominance test, and a prevalence index less than or equal to 3.0.

US Army Corps of Engineers

SOIL Sampling Point: DP03w

Profile Desc Depth	Matrix		Redox Features	<del></del>	
(inches)	Color (moist)	%	Color (moist) % Type <sup>1</sup> Lo	oc <sup>2</sup> Texture	Remarks
0 - 24	10YR 2/1	100		Peat	
-					
-					
1- 0.0					
			Reduced Matrix, CS=Covered or Coated Sa		ration: PL=Pore Lining, M=Matrix.
_		cable to all	LRRs, unless otherwise noted.)		rs for Problematic Hydric Soils <sup>3</sup> :
<u>✓</u> Histosol	` '		Sandy Redox (S5)		n Muck (A10)
Black Hi	oipedon (A2)		<ul><li>Stripped Matrix (S6)</li><li>Loamy Mucky Mineral (F1) (except ML)</li></ul>		Parent Material (TF2)  Shallow Dark Surface (TF12)
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	· — ·	er (Explain in Remarks)
	l Below Dark Surfa	ce (A11)	Depleted Matrix (F3)	0	E (Explain in Remarks)
	ark Surface (A12)	(* * * * * )	Redox Dark Surface (F6)	<sup>3</sup> Indicato	rs of hydrophytic vegetation and
· <del></del>	lucky Mineral (S1)		Depleted Dark Surface (F7)		nd hydrology must be present,
Sandy G	leyed Matrix (S4)		Redox Depressions (F8)	unles	s disturbed or problematic.
Restrictive L	ayer (if present):				
Type:					
Depth (inc	ches):			Hydric Soil	Present? Yes No
Remarks:				I	
Histosol.	Sapric. Su	lfidic od	or at 16 inches.		
HYDROLO	•		or at 16 inches.		
HYDROLO Wetland Hyd	GY drology Indicators	::	or at 16 inches.	Secor	ndary Indicators (2 or more required)
HYDROLO Wetland Hyd Primary Indic	GY drology Indicators eators (minimum of	::	l; check all that apply)		
HYDROLO Wetland Hyd Primary Indic Surface	GY drology Indicators eators (minimum of Water (A1)	::	i; check all that apply) Water-Stained Leaves (B9) ( <b>excep</b>		ndary Indicators (2 or more required) /ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
HYDROLO Wetland Hyd Primary Indic Surface	GY drology Indicators eators (minimum of Water (A1) ter Table (A2)	::	i; check all that apply)  Water-Stained Leaves (B9) (exception of the context	W	/ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Saturatio	GY  drology Indicators eators (minimum of Water (A1) ter Table (A2) on (A3)	::	i; check all that apply)  Water-Stained Leaves (B9) (excep  MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)	W	/ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10)
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Saturatio  Water M	GY drology Indicators eators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1)	::	: check all that apply)  Water-Stained Leaves (B9) (exception of the content	W D D	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Saturatio  Water M  Sedimer	GY drology Indicators eators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2)	::	: check all that apply)  Water-Stained Leaves (B9) (exception of the content		Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Saturatic  Water M  Sedimer  Drift Dep	GY drology Indicators eators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1)	::	; check all that apply)    Water-Stained Leaves (B9) (exceporable MLRA 1, 2, 4A, and 4B)   Salt Crust (B11)   Aquatic Invertebrates (B13)   Hydrogen Sulfide Odor (C1)   Oxidized Rhizospheres along Livin	W D D S S S G Roots (C3)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2)
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Saturatic  Water M  Sedimer  Drift Dep  Algal Ma	drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) to Deposits (B2) cosits (B3) at or Crust (B4)	::	: check all that apply)    Water-Stained Leaves (B9) (exceporable 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)	W D D S S S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3)
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep	drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) to Deposits (B2) cosits (B3) at or Crust (B4)	::	; check all that apply)    Water-Stained Leaves (B9) (exceporable MLRA 1, 2, 4A, and 4B)   Salt Crust (B11)   Aquatic Invertebrates (B13)   Hydrogen Sulfide Odor (C1)   Oxidized Rhizospheres along Livin	D	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5)
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Surface	GY  drology Indicators stators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6)	s: one required	check all that apply	Dt W D Si Si Si Si Si Si Si Si Si RR A) R	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3)
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Surface  Inundatio	GY drology Indicators eators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) osits (B5)	one required	check all that apply    Water-Stained Leaves (B9) (exception 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) (Leave In the Interval I	Dt W D Si Si Si Si Si Si Si Si Si RR A) R	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Surface  Inundatio	drology Indicators eators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Vis ble on Aerial	one required	check all that apply    Water-Stained Leaves (B9) (exception 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) (Leave In the Interval I	Dt W D Si Si Si Si Si Si Si Si Si RR A) R	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Saturatic  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Surface  Inundatic  Sparsely	drology Indicators eators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) arks (B3) arks (B3) art or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aerial vegetated Concav vations:	one required Imagery (B7	check all that apply     Water-Stained Leaves (B9) (excepout 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) (L7)   Other (Explain in Remarks)	Dt W D Si Si Si Si Si Si Si Si Si RR A) R	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
HYDROLO  Wetland Hyd  Primary India  Surface  High Wa  Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Surface  Inundatio  Sparsely  Field Observ  Surface Water	drology Indicators cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) ot Deposits (B2) oosits (B3) ot or Crust (B4) oosits (B5) Soil Cracks (B6) on Vis ble on Aerial ovegetated Concavations: er Present?	i: one required Imagery (B7 ve Surface (B	check all that apply	Dt W D Si Si Si Si Si Si Si Si Si RR A) R	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
HYDROLO  Wetland Hyd  Primary India  Surface  High Wa  Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Surface  Inundatio  Sparsely  Field Observ  Surface Water  Water Table	drology Indicators stators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aerial of Vegetated Concar vations: er Present? Present?	Imagery (B7 ve Surface (B	check all that apply    Water-Stained Leaves (B9) (except 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) (Leave Control of the C	D D Sing Roots (C3)	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
HYDROLO  Wetland Hyd  Primary India  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	drology Indicators stators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aerial vegetated Concavations: er Present? Present? resent?	Imagery (B7 ve Surface (E Yes   1 Yes   1	Check all that apply    Water-Stained Leaves (B9) (exception 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) (Lagrange)   Other (Explain in Remarks)   Other (Explain in Remarks)   Depth (inches):	of W D S S S S S S S F F F Wetland Hydrology	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
HYDROLO  Wetland Hyd  Primary India  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	drology Indicators stators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aerial vegetated Concavations: er Present? Present? resent?	Imagery (B7 ve Surface (E Yes   1 Yes   1	check all that apply    Water-Stained Leaves (B9) (except 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) (Leave Control of the C	of W D S S S S S S S F F F Wetland Hydrology	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
HYDROLO  Wetland Hyd  Primary India  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	drology Indicators stators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aerial vegetated Concavations: er Present? Present? resent?	Imagery (B7 ve Surface (E Yes   1 Yes   1	Check all that apply    Water-Stained Leaves (B9) (exception 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) (Lagrange)   Other (Explain in Remarks)   Other (Explain in Remarks)   Depth (inches):	of W D S S S S S S S F F F Wetland Hydrology	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
HYDROLO  Wetland Hyd  Primary India  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	drology Indicators stators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) osits (B3) at or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aerial vegetated Concavations: er Present? Present? resent?	Imagery (B7 ve Surface (E Yes   1 Yes   1	Check all that apply    Water-Stained Leaves (B9) (exception 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) (Lagrange)   Other (Explain in Remarks)   Other (Explain in Remarks)   Depth (inches):	of W D S S S S S S S F F F Wetland Hydrology	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Y Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Surface  Inundatio  Sparsely  Field Observ  Surface Water  Water Table  Saturation Pr  (includes cap  Describe Rec	drology Indicators stators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Vis ble on Aerial of Vegetated Concar vations: er Present? Present? Present? corded Data (stream	Imagery (B7 ve Surface (B Yes   Yes   Yes   The gauge, mo	Check all that apply	D D D S S S S S S S S S S S S S S S S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Y Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Surface  Inundatio  Sparsely  Field Observ  Surface Water  Water Table  Saturation Pr  (includes cap  Describe Rec	drology Indicators stators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Vis ble on Aerial of Vegetated Concar vations: er Present? Present? Present? corded Data (stream	Imagery (B7 ve Surface (B Yes   Yes   Yes   The gauge, mo	Check all that apply    Water-Stained Leaves (B9) (exception 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) (Lagrange)   Other (Explain in Remarks)   Other (Explain in Remarks)   Depth (inches):	D D D S S S S S S S S S S S S S S S S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)
HYDROLO  Wetland Hyd  Primary Indic  Surface  High Wa  Y Saturatio  Water M  Sedimer  Drift Dep  Algal Ma  Iron Dep  Surface  Inundatio  Sparsely  Field Observ  Surface Water  Water Table  Saturation Pr  (includes cap  Describe Rec	drology Indicators stators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) Soil Cracks (B6) on Vis ble on Aerial of Vegetated Concar vations: er Present? Present? Present? corded Data (stream	Imagery (B7 ve Surface (B Yes   Yes   Yes   The gauge, mo	Check all that apply	D D D S S S S S S S S S S S S S S S S S	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9) eomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) rost-Heave Hummocks (D7)

Project/Site: Schrieber Meadows	(	City/Count	ty: Lincoln (	County	Sampling Date: 2024-07-16
Applicant/Owner: Montana Dept. of Transportation	1			State: Montana	Sampling Point: DP04u
Investigator(s): R Baumgarten		Section, T	ownship, Rar	nge: S13 T27N R30W	V
Landform (hillslope, terrace, etc.): Backslope					
Subregion (LRR): E 43A	Lat: 48.	108127		Long: -115.411478	Datum: NAD 83
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terrace				=	
Are climatic / hydrologic conditions on the site typical for this	time of yea	ar? Yes	✓ No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology si	-				oresent? Yes No
Are Vegetation, Soil, or Hydrology na					
SUMMARY OF FINDINGS – Attach site map s					
Hydrophytic Vegetation Present? Yes No	·				
Hydric Soil Present? Yes No			the Sampled thin a Wetlan		No
Wetland Hydrology Present? Yes No		, vii	um a wenan		
Remarks:					
Upland data point at SE end of site.					
VEGETATION – Use scientific names of plant					
Tree Stratum (Plot size: 30 ft r			nt Indicator ? Status	Dominance Test works	
1. Pseudotsuga menziesii	10	~	FACU	Number of Dominant Sp That Are OBL, FACW, of	
2				Total Number of Domina	ant
3				Species Across All Stra	_
4				Percent of Dominant Sp	pecies
Sapling/Shrub Stratum (Plot size: 15 ft r )	10	= Total C	Cover	That Are OBL, FACW, o	
1. Pseudotsuga menziesii	5	~	FACU	Prevalence Index worl	
2. Symphoricarpos albus	5	~	FACU	Total % Cover of:	
3					x 1 = 0 x 2 = 10
4					x 3 = 21
5					x 4 = 164
Herb Stratum (Plot size: 5 ft r )	10	= Total C	Cover	-	x 5 = 255
1. Nassella viridula	50	~	UPL	Column Totals: 104	(A) <u>450</u> (B)
2. Pascopyrum smithii	20	~	FACU	Prevalence Index	= B/A = 4.32
3. Alopecurus pratensis	5		FAC	Hydrophytic Vegetation	
4. Phalaris arundinacea	5		FACW	1 - Rapid Test for H	Hydrophytic Vegetation
5. Agrostis capillaris	1		FAC	2 - Dominance Tes	
6. Poa palustris 7. Verbascum thapsus	1		FAC FACU	3 - Prevalence Inde	
8 Penstemon confertus	1		UPL		Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)
9				5 - Wetland Non-Va	
10				Problematic Hydror	phytic Vegetation <sup>1</sup> (Explain)
11.					and wetland hydrology must
	84	= Total Co	over	be present, unless distu	ırbed or problematic.
Woody Vine Stratum (Plot size:)					
1				Hydrophytic Vegetation	
2			over	Present? Yes	s No <u>/</u>
% Bare Ground in Herb Stratum 16		i otai ot			
Remarks:					
No hydrophytic vegetation indicators	s met.				

SOIL Sampling Point: DP04u

Depth	Matrix		Redox Features		
(inches)	Color (moist)	%	Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
0 - 6	10YR 2/1	100		Loam	
6 - 8	10YR 3/6	100		Silt Loam	
8 - 15	10YR 2/1	100		Sandy Loam	Gravelly.
					· · · · · · · · · · · · · · · · · · ·
<u> </u>					
<sup>1</sup> Type: C=Cor	ncentration, D=De	pletion, RM	=Reduced Matrix, CS=Covered or Coated Sand		cation: PL=Pore Lining, M=Matrix.
Hydric Soil In	ndicators: (Appli	cable to all	LRRs, unless otherwise noted.)	Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histosol (	,		Sandy Redox (S5)		n Muck (A10)
	pedon (A2)		Stripped Matrix (S6)		Parent Material (TF2)
Black His			Loamy Mucky Mineral (F1) (except MLRA		y Shallow Dark Surface (TF12)
	Sulfide (A4)	co (A11)	Loamy Gleyed Matrix (F2)	Otn	er (Explain in Remarks)
	Below Dark Surfark Surface (A12)	CC (A11)	<ul><li>Depleted Matrix (F3)</li><li>Redox Dark Surface (F6)</li></ul>	<sup>3</sup> Indicato	rs of hydrophytic vegetation and
	ucky Mineral (S1)		Depleted Dark Surface (F7)		nd hydrology must be present,
-	eyed Matrix (S4)		Redox Depressions (F8)		s disturbed or problematic.
	ayer (if present):				·
Туре:					
Depth (inch	nes):			Hydric Soil	Present? Yes No
Remarks:					
YDROLOG Wetland Hyd					
Drime - Land	rology maloators	s:			
rimary Indica	0,		d; check all that apply)	Secon	ndary Indicators (2 or more required)
-	0,		d; check all that apply) Water-Stained Leaves (B9) (except		ndary Indicators (2 or more required) /ater-Stained Leaves (B9) (MLRA 1, 2,
Surface V	ators (minimum of Vater (A1) er Table (A2)		Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	V	/ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Surface V High Wate	etors (minimum of Vater (A1) er Table (A2) n (A3)		<ul><li>Water-Stained Leaves (B9) (except</li><li>MLRA 1, 2, 4A, and 4B)</li><li>Salt Crust (B11)</li></ul>	v	/ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10)
Surface V High Wate Saturation Water Ma	ators (minimum of Vater (A1) er Table (A2) n (A3) arks (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	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) rry-Season Water Table (C2)
Surface V High Wate Saturation Water Ma Sediment	etors (minimum of Vater (A1) er Table (A2) in (A3) erks (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>	W D S	/ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9
Surface V High Wate Saturation Water Ma Sediment Drift Depo	etors (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) : Deposits (B2) osits (B3)		<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> <li>Oxidized Rhizospheres along Living F</li> </ul>	V D D S Roots (C3) G	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) rry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 teomorphic Position (D2)
Surface V High Wate Saturation Water Ma Sediment Drift Depo	etors (minimum of Vater (A1) er Table (A2) in (A3) erks (B1) drks (B2) obsits (B2) or Crust (B4)		<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> <li>Oxidized Rhizospheres along Living F</li> <li>Presence of Reduced Iron (C4)</li> </ul>	W D S S Roots (C3) G	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 teomorphic Position (D2) hallow Aquitard (D3)
Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo	eators (minimum of Vater (A1) er Table (A2) in (A3) erks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (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 F Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils	V D S Roots (C3) G S (C6) F	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) rry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 reomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5)
Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S	eators (minimum of Vater (A1) er Table (A2) in (A3) erks (B1) drks (B2) posits (B3) or Crust (B4) posits (B5) soil Cracks (B6)	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 F     Presence of Reduced Iron (C4)      Recent Iron Reduction in Tilled Soils     Stunted or Stressed Plants (D1) (LRF	— V — D — D — S Roots (C3) — G — S (C6) — F R A) — R	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 decomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation	eators (minimum of Vater (A1) er Table (A2) in (A3) arks (B1) f Deposits (B2) posits (B3) or Crust (B4) posits (B5) Goil Cracks (B6) in Vis ble on Aerial	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 Feresence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRFO) Other (Explain in Remarks)	— V — D — D — S Roots (C3) — G — S (C6) — F R A) — R	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) rry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 reomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5)
Surface V High Wate Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely	etors (minimum of Vater (A1) er Table (A2) n (A3) erks (B1) er Deposits (B2) osits (B3) or Crust (B4) osits (B5) soil Cracks (B6) n Vis ble on Aerial Vegetated Concar	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 Feresence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRFO) Other (Explain in Remarks)	— V — D — D — S Roots (C3) — G — S (C6) — F R A) — R	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 decomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
Surface V High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely	eators (minimum of Vater (A1) er Table (A2) in (A3) erks (B1) er Deposits (B2) erks (B3) er Crust (B4) esits (B5) esits (B5) esit (B5) esits (B6) in Vis ble on Aerial Vegetated Concar ations:	one required I Imagery (Bove 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 Feresence of Reduced Iron (C4)      Recent Iron Reduction in Tilled Soils      Stunted or Stressed Plants (D1) (LRF)  Other (Explain in Remarks)	— V — D — D — S Roots (C3) — G — S (C6) — F R A) — R	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 decomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
Surface V High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundation Sparsely Field Observa	ators (minimum of Vater (A1) er Table (A2) n (A3) arks (B1) Deposits (B2) posits (B3) or Crust (B4) posits (B5) Goil Cracks (B6) n Vis ble on Aerial Vegetated Concar ations: r Present?	one required I Imagery (Bound of the Surface (Market 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 Fersence of Reduced Iron (C4)     Recent Iron Reduction in Tilled Soils Stunted or Stressed Plants (D1) (LRF Other (Explain in Remarks)  No    Depth (inches):	— V — D — D — S Roots (C3) — G — S (C6) — F R A) — R	Vater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 decomorphic Position (D2) hallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
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Project/Site: Schrieber Meadows	c	City/County	Lincoln	County	Sampling Date: 2024-07-16
Applicant/Owner: Montana Dept. of Transportation				State: Montana	Sampling Point: DP04w
Investigator(s): E Reynaud	8	Section, To	wnship, Raı	nge: S13 T27N R30V	V
Landform (hillslope, terrace, etc.): Toeslope		Local relief	(concave,	convex, none): Concav	re Slope (%): 3
Subregion (LRR): E 43A	Lat: 48.	108161		Long: -115.411388	Datum: NAD 83
Soil Map Unit Name: 108 - Andic Dystric Eutrochrepts, lacustrine terrace	s-Andic Dystro	ochrepts, glaci	al outwash terra	aces, complex NWI classific	cation: Not mapped
Are climatic / hydrologic conditions on the site typical for this	time of yea	ır? Yes	✓ No	(If no, explain in R	Remarks.)
Are Vegetation, Soil, or Hydrology sig	gnificantly o	disturbed?	Are "	Normal Circumstances" p	present? Yes No
Are Vegetation, Soil, or Hydrology na	aturally prob	olematic?	(If ne	eded, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	howing	samplin	g point le	ocations, transects	s, important features, etc.
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Remarks:  Yes No Yes No	·		e Sampled in a Wetlar	Area nd? Yes <u></u>	, No
Data point taken in reed canarygrass monoc	ulture in	expand	ed wetla	nd boundary in the	south part of the site.
VEGETATION – Use scientific names of plant	s.				
	Absolute	Dominant	Indicator	Dominance Test work	(sheet:
Tree Stratum (Plot size: 30 ft r )	% Cover			Number of Dominant S That Are OBL, FACW,	1
2				Total Number of Domir Species Across All Stra	4
4				Percent of Dominant S	pecies
Sapling/Shrub Stratum (Plot size: 15 ft r )		= Total Co	ver	That Are OBL, FACW,	` ,
1				Prevalence Index wor Total % Cover of:	
2					$x_1 = 0$
3				FACW species 100	x 2 = 200
4				FAC species 0	x 3 = 0
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	100		FACW	Column Totals: 100	(A) <u>200</u> (B)
2				Prevalence Index	c = B/A = 2.00
3				Hydrophytic Vegetation	
4					Hydrophytic Vegetation
5				✓ 2 - Dominance Tes	st is >50%
6				✓ 3 - Prevalence Index	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-V	
10				=	phytic Vegetation <sup>1</sup> (Explain) il and wetland hydrology must
11	100			be present, unless distr	
Woody Vine Stratum (Plot size:)	100 :	= Total Cov	/er		
1				Hydrophytic	
2				Vegetation	<b>v</b>
	=			Present? Ye	es No
% Bare Ground in Herb Stratum 0  Remarks:					
		! . !	ua ::!!!		
Evidence of hydrophytic vegetation incluprevalence index less than or equal to 3.	-	ositive	rapid te	est, a positive dor	illinance test, and a

US Army Corps of Engineers

SOIL

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

Depth Matrix Redox Features

Depth inches)	Color (moist)	%	Color (moist) % Type <sup>1</sup> Loc <sup>2</sup>	Texture	Remarks
0 - 16	10YR 2/1	100		Peat	
	,		·		
<u> </u>					<u> </u>
					_
-					
-					
_					
		_	·	_	
		_	· —— — — —	_	<del>-</del>
			M=Reduced Matrix, CS=Covered or Coated Sand C		Location: PL=Pore Lining, M=Matrix.
		cable to a	II LRRs, unless otherwise noted.)		ators for Problematic Hydric Soils <sup>3</sup> :
Histosol (	` '		Sandy Redox (S5)		cm Muck (A10)
	ipedon (A2)		Stripped Matrix (S6)		Red Parent Material (TF2)
Black His			Loamy Mucky Mineral (F1) (except MLRA 1		'ery Shallow Dark Surface (TF12)
	n Sulfide (A4)	oo (A11)	Loamy Gleyed Matrix (F2)		Other (Explain in Remarks)
	Below Dark Surfack Surface (A12)	ce (ATT)	Depleted Matrix (F3) Redox Dark Surface (F6)	<sup>3</sup> India	ators of hydrophytic vegetation and
_	ucky Mineral (S1)		Depleted Dark Surface (F7)		etland hydrology must be present,
	leyed Matrix (S4)		Redox Depressions (F8)		less disturbed or problematic.
	ayer (if present):				
Type:					
-					oil Present? Yes No
Depth (inc	hes):			Hvdric S	
emarks:			ic matter qualifies soil as a Hist		
emarks: Ieast 1	l6 inches of	organ			<u> </u>
emarks: t least 1 DROLOGetland Hyd	6 inches of	organ		osol.	condary Indicators (2 or more required)
emarks: Ieast 1  DROLOG etland Hyd imary Indica	6 inches of	organ	ic matter qualifies soil as a Hist	osol.	
DROLOGEILAND INDICATE SURFACE N	I6 inches of  GY  Irology Indicators ators (minimum of	organ	ic matter qualifies soil as a Hist	osol.	condary Indicators (2 or more required)
DROLOGE Surface Verland Hydroge Surface Verland Hydroge High Water Surface Verland High Water Surface	GY  Irology Indicators ators (minimum of Water (A1) ter Table (A2)	organ	ic matter qualifies soil as a History  ed; check all that apply)  Water-Stained Leaves (B9) (except	osol.	condary Indicators (2 or more required) Water-Stained Leaves (B9) ( <b>MLRA 1, 2</b>
DROLOG etland Hyd mary Indica Surface V High Wat	GY  Irology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3)	organ	ed; check all that apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	osol.	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B)
DROLOG etland Hyd imary Indica Surface V High Wat Saturatio Water Ma	GY  Irology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3)	organ	ed; check all that apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)	osol.	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10)
DROLOGETIAND HOLOGETIAND HYDROLOGETIAND HYDROLOGETI	If inches of a long inches of a long indicators a long indicators a long inches (A1) arks (B1)	organ	ed; check all that apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11) Aquatic Invertebrates (B13)	osol.	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
DROLOG etland Hyd imary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depo	If inches of Irology Indicators Irology Indicators Irology Indicators Irology	organ	ed; check all that apply)  Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)  Salt Crust (B11) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1)	osol.	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C5)
DROLOG etland Hyd imary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depo	If of inches of a control of the con	organ	ed; check all that apply)  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	osol.  Seconds (C3)	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2)
DROLOG etland Hyd imary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depo	If of inches of a control of the con	organ	ed; check all that apply)  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	osol.  Secots (C3)	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3)
DROLOG etland Hyd imary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depr Algal Mat Iron Depo	If inches of Irology Indicators Irology Indicators Irology Indicators Irology	organ	ed; check all that apply)  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)	osol.  Secots (C3)	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
DROLOG etland Hyd imary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely	If inches of Irology Indicators Irology Indicators Irology Indicators Irology	organ	ed; check all that apply)  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 Round Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (Called and Called And Called Stunted or Stressed Plants (D1) (LRR 20)  Other (Explain in Remarks)	osol.  Secots (C3)	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOG etland Hyd imary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely	If of inches of a control of the con	organ	ed; check all that apply)  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 Roy  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (Case)  Stunted or Stressed Plants (D1) (LRR 20)  (B8)	osol.  Secots (C3)	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOG etland Hyd imary Indica Surface W High Wat Saturatio Water Ma Sediment Drift Depu Algal Mat Iron Depo Surface S Inundatio Sparsely	If of inches of a control of the con	organ	ed; check all that apply)  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 2)  (B8)  No Depth (inches):	osol.  Secots (C3)	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
DROLOG etland Hyd imary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely eld Observ	Inches of Irology Indicators Irology	Imagery (Interpretation of the Surface of the Surfa	ed; check all that apply)  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 Rown Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (Company of the Company of the Compan	osol.  Secots (C3)	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
TDROLOG  TOROLOG  TOR	Inches of Irology Indicators Irology	Imagery (Interpretation of the Surface of the Surfa	ed; check all that apply)  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 Rown Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (Company of the Company of the Compan	osol.  Secots (C3)	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A)
Emarks:  I least 1  I DROLOG  etland Hyd  imary Indica  Surface V  High Wat  Saturatio  Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo  Surface S  Inundatio  Sparsely  eld Observ  urface Water  atturation Proceeding	Irology Indicators ators (minimum of Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aerial Vegetated Concaverations: ar Present? Present? esent?	Imagery (I	ed; check all that apply)  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 Rown Recent Iron Reduction in Tilled Soils (Compared of the Compared of the	osol.  Seconds (C3)	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Cs Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
DROLOG etland Hyd imary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely eld Observ ater Table F	Irology Indicators ators (minimum of Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aerial Vegetated Concaverations: ar Present? Present? esent?	Imagery (I	ed; check all that apply)  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 Rown Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soils (Company of the Company of the Compan	osol.  Seconds (C3)	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Cs Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
DROLOG etland Hyd imary Indica Surface V High Wat Saturatio Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely eld Observ ater Table F	Irology Indicators ators (minimum of Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aerial Vegetated Concaverations: ar Present? Present? esent?	Imagery (I	ed; check all that apply)  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 Rown Recent Iron Reduction in Tilled Soils (Compared of the Compared of the	osol.  Seconds (C3)	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (Cs Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
DROLOG etland Hyd imary Indica Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely eld Observ irface Water Table Returnation Procludes cap escribe Rec	Irology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aerial Vegetated Concaverations: er Present? Present? esent? illary fringe) oorded Data (stream	Imagery (I ve Surface Yes Ves Ves n gauge, n	ed; check all that apply)  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 Rown Recent Iron Reduction in Tilled Soils (Compared of the Compared of the	osol.  Secots (C3)	condary Indicators (2 or more required) Water-Stained Leaves (B9) (MLRA 1, 2 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C3 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)

Project/Site: Schrieber Meadows	c	City/County	Lincoln (	County	Sampling Date: 2024-07-16	
Applicant/Owner: Montana Dept. of Transportation	olicant/Owner: Montana Dept. of Transportation					
Investigator(s): E Reynaud						
Landform (hillslope, terrace, etc.): Backslope						
Subregion (LRR): E 43A						
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly						
Are climatic / hydrologic conditions on the site typical for this						
Are Vegetation, Soil, or Hydrologysi	-					
Are Vegetation, Soil, or Hydrology n						
SUMMARY OF FINDINGS – Attach site map						
Hydrophytic Vegetation Present? Yes No	·					
Hydric Soil Present? Yes No			e Sampled in a Wetlan		No	
Wetland Hydrology Present? Yes No		WILII	ili a wellali	iu! les	NO	
Remarks:						
Data point taken near wooded area.						
VEGETATION – Use scientific names of plant						
Tree Stratum (Plot size: 30 ft r	Absolute % Cover			Dominance Test work		
1. Pseudotsuga menziesii	35	<i>V</i>	FACU	Number of Dominant S That Are OBL, FACW, of		
2				Total Number of Domin		
3				Species Across All Stra		
4				Percent of Dominant Sp	necies	
Sapling/Shrub Stratum (Plot size: 15 ft r	35	= Total Co	ver	That Are OBL, FACW,	or FAC: <u>50.00</u> (A/B)	
1. Symphoricarpos albus	10	~	FACU	Prevalence Index wor	ksheet:	
2. Crataegus douglasii	5		FAC		Multiply by:	
3.					x 1 = 0	
4				07	x 2 = 0	
5.				FAC species 87	x 3 = 261	
- 6	15	= Total Co	ver	•	x 4 = 180 x 5 = 10	
Herb Stratum (Plot size: 5 ft r	00		E40	UPL species 2  Column Totals: 134		
1. Alopecurus pratensis	60		FAC			
2. Poa pratensis 3. Equisetum arvense	<u>10</u> 5		FAC FAC	Prevalence Index		
4 Phleum pratense	5		FAC	Hydrophytic Vegetation		
5 Cirsium arvense	2		FAC	1 - Rapid Test for F	• • •	
6. Nassella viridula	2		UPL	2 - Dominance Tes 3 - Prevalence Inde		
7					Adaptations <sup>1</sup> (Provide supporting	
8.					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					l and wetland hydrology must	
W 1 15 00 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	84	= Total Cov	ver .	be present, unless distu	inded of problematic.	
Woody Vine Stratum (Plot size:)						
1				Hydrophytic Vegetation		
2				Present? Yes	s No <u> </u>	
% Bare Ground in Herb Stratum 16		- 10tai C0V	CI			
Remarks:				•		
No hydrophytic vegetation indicators	obser	ved.				

SOIL Sampling Point: DP05u

(inches)	Matrix		Redox Features		Б .
	Color (moist)		Color (moist) % Type <sup>1</sup> Lo	oc <sup>2</sup> Texture	Remarks
	10YR 2/2	100		Loam	
<u> </u>					
-					
Type: C=Con	centration, D=De	oletion, RM=Re	educed Matrix, CS=Covered or Coated Sa		n: PL=Pore Lining, M=Matrix.
lydric Soil Inc	dicators: (Applic	able to all LR	Rs, unless otherwise noted.)	Indicators f	or Problematic Hydric Soils <sup>3</sup> :
Histosol (A	•		Sandy Redox (S5)	2 cm M	• •
Histic Epip			Stripped Matrix (S6)		rent Material (TF2)
Black Histi			Loamy Mucky Mineral (F1) (except ML		allow Dark Surface (TF12)
	Sulfide (A4)		Loamy Gleyed Matrix (F2)	Other (E	Explain in Remarks)
	Below Dark Surfac k Surface (A12)	Æ (ATT)	Depleted Matrix (F3)  Redox Dark Surface (F6)	<sup>3</sup> Indicators o	of hydrophytic vegetation and
<del></del>	cky Mineral (S1)	-	Depleted Dark Surface (F7)		nydrology must be present,
	eyed Matrix (S4)		Redox Depressions (F8)		sturbed or problematic.
	yer (if present):		- ' ' ' '		•
_					
Depth (inch	ies):		_	Hydric Soil Pre	esent? Yes No
Remarks:	,				
YDROLOG Wetland Hydro	ology Indicators	<u> </u>			
Primary Indicat	tors (minimum of	one required; o	heck all that apply)	Secondar	y Indicators (2 or more required)
Surface W	/ater (A1)		Water-Stained Leaves (B9) (exception)	ot Wate	r-Stained Leaves (B9) (MLRA 1, 2,
_	er Table (A2)		MLRA 1, 2, 4A, and 4B)		A, and 4B)
Saturation			Salt Crust (B11)		age Patterns (B10)
Water Mar			Aquatic Invertebrates (B13)	=	Season Water Table (C2)
<del></del> '	Deposits (B2)		Hydrogen Sulfide Odor (C1)		ation Visible on Aerial Imagery (C9
			Oxidized Rhizospheres along Livin	• • • • • • • • • • • • • • • • • • • •	. , ,
Drift Depos	or Crust (B4)		Presence of Reduced Iron (C4)		ow Aquitard (D3)
Algal Mat o	sits (B5)		Recent Iron Reduction in Tilled So	ile (C6) EAC	Noutral Toot (DE)
Algal Mat o					Neutral Test (D5)
Algal Mat o Iron Depos Surface So	oil Cracks (B6)		Stunted or Stressed Plants (D1) (L	RR A) Raise	ed Ant Mounds (D6) (LRR A)
Algal Mat of Iron Depos Surface So Inundation	oil Cracks (B6) n Vis ble on Aerial		Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	RR A) Raise	
Algal Mat of Iron Deposes Surface Some Inundation Sparsely V	oil Cracks (B6) n Vis ble on Aerial /egetated Concav		Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	RR A) Raise	ed Ant Mounds (D6) (LRR A)
Algal Mat of Iron Depose Surface So Inundation Sparsely V	oil Cracks (B6)  n Vis ble on Aerial  /egetated Concav  ations:	e Surface (B8)	Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	RR A) Raise	ed Ant Mounds (D6) (LRR A)
Algal Mat of Iron Depose Surface So Inundation Sparsely Vield Observa	oil Cracks (B6)  Nois ble on Aerial Vegetated Concavations:  Present?	e Surface (B8)  /es No	Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	RR A) Raise	ed Ant Mounds (D6) (LRR A)
Algal Mat of Iron Depose Surface So Inundation Sparsely Vield Observa Surface Water Water Table Pr	oil Cracks (B6)  Nois ble on Aerial Vegetated Concavations:  Present?	e Surface (B8)  /es No /es No	Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)  Depth (inches): Depth (inches):	Raise Frost	ed Ant Mounds (D6) ( <b>LRR A</b> ) -Heave Hummocks (D7)
Algal Mat of Iron Depose Surface So Inundation Sparsely Vield Observa Surface Water Water Table Prosaturation Press	oil Cracks (B6)  Nois ble on Aerial Vegetated Concavations:  Present?  resent?	e Surface (B8)  /es No /es No	Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)	Raise Frost	ed Ant Mounds (D6) (LRR A)
Algal Mat of Iron Depose Surface So Inundation Sparsely Vield Observa Surface Water Water Table Prosaturation Press(includes capill	oil Cracks (B6)  Nois ble on Aerial Vegetated Concavations: Present?  resent?  sent?  lary fringe)	e Surface (B8)  /es No /es No /es No	Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)  Depth (inches): Depth (inches): Depth (inches):	RR A) Raise	ed Ant Mounds (D6) ( <b>LRR A</b> ) -Heave Hummocks (D7)
Algal Mat of Iron Depose Surface So Inundation Sparsely Vield Observa Surface Water Water Table Prosaturation Press(includes capill	oil Cracks (B6)  Nois ble on Aerial Vegetated Concavations: Present?  resent?  sent?  lary fringe)	e Surface (B8)  /es No /es No /es No	Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)  Depth (inches): Depth (inches):	RR A) Raise	ed Ant Mounds (D6) ( <b>LRR A</b> ) -Heave Hummocks (D7)
Algal Mat of Iron Depose Surface Some Inundation Sparsely Visited Observa Surface Water Water Table Properties Control of Saturation Prescribe Recompagnets (includes capill Describe Recompagnets)	oil Cracks (B6)  Nois ble on Aerial Vegetated Concavations: Present?  resent?  sent?  lary fringe)	e Surface (B8)  /es No /es No /es No	Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)  Depth (inches): Depth (inches): Depth (inches):	RR A) Raise	ed Ant Mounds (D6) ( <b>LRR A</b> ) -Heave Hummocks (D7)
Algal Mat of Iron Depose Surface So Inundation Sparsely Visited Observa Surface Water Water Table Proposition Pressigncial Control Con	oil Cracks (B6)  Nois ble on Aerial Vegetated Concavations:  Present?  resent?  sent?  lary fringe)  orded Data (strean	e Surface (B8)  /es No /es No /es No n gauge, monit	Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)  Depth (inches):	RR A) Raise	ed Ant Mounds (D6) ( <b>LRR A</b> ) -Heave Hummocks (D7)
Algal Mat of Iron Depose Surface So Inundation Sparsely Visited Observa Surface Water Water Table Proposition Pressigncial Control Con	oil Cracks (B6)  Nois ble on Aerial Vegetated Concavations:  Present?  resent?  sent?  lary fringe)  orded Data (strean	e Surface (B8)  /es No /es No /es No n gauge, monit	Stunted or Stressed Plants (D1) (L Other (Explain in Remarks)  Depth (inches): Depth (inches): Depth (inches):	RR A) Raise	ed Ant Mounds (D6) ( <b>LRR A</b> ) -Heave Hummocks (D7)

Project/Site: Schrieber Meadows	City/Co	<sub>unty:</sub> Lincoln C	County	Sampling Date: 2024-07-16
Applicant/Owner: Montana Dept. Of Transportation	-	-	State: Montana	Sampling Point: DP05w
Investigator(s): R McEldowney	Section	n, Township, Ran	nge: S13 T27N R30V	V
Landform (hillslope, terrace, etc.): Floodplain				
Subregion (LRR): E 43A	Lat: 48.10900	02	Long: -115.412979	Datum: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly di			NWI classific	
Are climatic / hydrologic conditions on the site typical for this til	me of year? Ye			
Are Vegetation, Soil, or Hydrology sign	nificantly disturb	ed? Are "I	Normal Circumstances" p	oresent? Yes No
Are Vegetation, Soil, or Hydrology natu	urally problemat	ic? (If nee	eded, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	owing sam	pling point lo	ocations, transects	s, important features, etc.
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Remarks:  Yes  No  No  No		Is the Sampled within a Wetlan		No
PEM, riverine wetland west of Coyote	Creek.			
VEGETATION – Use scientific names of plants				
Tree Stratum         (Plot size: 30 ft r )         9           1.	% Cover Speci		Number of Dominant S That Are OBL, FACW,  Total Number of Domin Species Across All Stra  Percent of Dominant S That Are OBL, FACW,	pecies or FAC: 1 (A)  nant tata: 1 (B)
Sapling/Shrub Stratum       (Plot size: 15 ft r )         1.			Prevalence Index wor           Total % Cover of:           OBL species         0           FACW species         95           FAC species         0           FACU species         0	Multiply by:  x 1 = 0  x 2 = 190  x 3 = 0  x 4 = 0
	95	— <del></del>	Column Totals: 95	x 5 = 0 (A) 190 (B)
Woody Vine Stratum         (Plot size:)           1           2	95 = Tota	I Cover	2 - Dominance Tes  3 - Prevalence Inde 4 - Morphological Adata in Remarks 5 - Wetland Non-V Problematic Hydro Indicators of hydric soibe present, unless districted.  Hydrophytic Vegetation	on Indicators:  Hydrophytic Vegetation  st is >50%  ex is ≤3.0¹  Adaptations¹ (Provide supporting s or on a separate sheet)  ascular Plants¹  phytic Vegetation¹ (Explain)  il and wetland hydrology must
Remarks:  Monoculture of reed canarygrass (Pha	alaris arun	dinacea).		

SOIL Sampling Point: DP05w

	. ,	to the depth	needed to document the indicator or c	confirm t	ne absence	or indicators.)
Depth (inches)	Matrix Color (moist)	%	Redox Features  Color (moist) % Type <sup>1</sup> L	_oc²	Texture	Remarks
0 - 3	10YR 2/2	100			Peat	Fibric
3 - 8	10YR 2/2	100			Peat	Hemic
8 - 16	10YR 2/1	100			Peat	Sapric
	101112/1					Сарпо
-						
-						
<sup>1</sup> Type: C=Co	ncentration, D=Dep	oletion, RM=R	educed Matrix, CS=Covered or Coated Sa	and Grain	ns. <sup>2</sup> Loc	ation: PL=Pore Lining, M=Matrix.
Hydric Soil II	ndicators: (Applic	able to all Li	RRs, unless otherwise noted.)		Indicato	rs for Problematic Hydric Soils <sup>3</sup> :
Histosol (	` '	_	_ Sandy Redox (S5)			n Muck (A10)
	ipedon (A2)	_	_ Stripped Matrix (S6)			Parent Material (TF2)
Black His	` '	_	_ Loamy Mucky Mineral (F1) (except ML	_RA 1)		Shallow Dark Surface (TF12)
	n Sulfide (A4) Below Dark Surfac	 	_ Loamy Gleyed Matrix (F2) _ Depleted Matrix (F3)		Othe	er (Explain in Remarks)
	rk Surface (A12)	,c (A11)	_ Redox Dark Surface (F6)		3Indicato	rs of hydrophytic vegetation and
	ucky Mineral (S1)	_	_ Depleted Dark Surface (F7)			nd hydrology must be present,
-	leyed Matrix (S4)		_ Redox Depressions (F8)			s disturbed or problematic.
Restrictive L	ayer (if present):					
Type:			<u> </u>			
Depth (inc	hes):				Hydric Soil	Present? Yes No
Remarks:				•		
Histosol	with a sulfid	ic odor a	at 8 inches.			
HYDROLOG	GY					
	rology Indicators:					
-			check all that apply)		Secor	idary Indicators (2 or more required)
-	Nater (A1)		Water-Stained Leaves (B9) (exce	ept		/ater-Stained Leaves (B9) (MLRA 1, 2,
	ter Table (A2)		MLRA 1, 2, 4A, and 4B)			4A, and 4B)
✓ Saturatio			Salt Crust (B11)		D	rainage Patterns (B10)
Water Ma	arks (B1)		Aquatic Invertebrates (B13)		D	ry-Season Water Table (C2)
	t Deposits (B2)		✓ Hydrogen Sulfide Odor (C1)			aturation Visible on Aerial Imagery (C9)
Drift Dep	osits (B3)		Oxidized Rhizospheres along Livir	ng Roots	(C3) <u><!--</u--> G</u>	eomorphic Position (D2)
Algal Mat	t or Crust (B4)		Presence of Reduced Iron (C4)		S	hallow Aquitard (D3)
Iron Depo	osits (B5)		Recent Iron Reduction in Tilled Sc	oils (C6)	<u> </u>	AC-Neutral Test (D5)
Surface S	Soil Cracks (B6)		Stunted or Stressed Plants (D1) (I	LRR A)	R	aised Ant Mounds (D6) (LRR A)
Inundatio	on Vis ble on Aerial	Imagery (B7)	Other (Explain in Remarks)		F	rost-Heave Hummocks (D7)
Sparsely	Vegetated Concav	e Surface (B8				
Field Observ						
Surface Wate			Depth (inches):			
Water Table F			Depth (inches):			
Saturation Pro		′es 🔽 No	Depth (inches): 0	Wetlan	d Hydrology	/ Present? Yes No
(includes capi Describe Rec		n gauge moni	toring well, aerial photos, previous inspec	tions) if a	available:	
200011201100	ordod Bata (otrodir	· gaago, mom	tering won, derical prictice, provided inopec	, iio iio j	avanabio.	
Remarks:						
	•••					
Histosol	with saturat	ion to th	e surface and a sulfidic od	dor.		

Project/Site: Schrieber Meadows		City/Cou	nty: Lincoln	County	Sampling Date: 2024-07-16
Applicant/Owner: Montana Dept. of Transportation	on			State: Montana	Sampling Point: DP06u
Investigator(s): R Baumgarten		Section,	Township, Ra	nge: S13 T27N R30W	
Landform (hillslope, terrace, etc.): Terrace/floodplain		Local re	elief (concave,	convex, none): Linear	Slope (%): 0
Subregion (LRR): E 43A	Lat: 48.	.110051	ļ	Long: -115.415142	Datum: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poorl				NWI classifica	
Are climatic / hydrologic conditions on the site typical for the	nis time of yea	ar? Yes			
Are Vegetation, Soil, or Hydrology					esent? Yes No
Are Vegetation, Soil, or Hydrology				eded, explain any answers	in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing	sampl	ling point l	ocations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes	No				
Hydric Soil Present? Yes	No		s the Sampled vithin a Wetlar		No
Wetland Hydrology Present? Yes	No	w	illiiii a vveliai	iu? 165	NO
Remarks:	root oido. Alf	though a	nita naaaaa th	a daminanaa taat far bya	Ironhutio voqetation it is not
Upland data point near the middle of the site on the w representative of the soil and hydrology observed.	rest side. All	tilougii s	site passes tii	e dominance test for flyc	rophytic vegetation, it is not
VEGETATION – Use scientific names of plan	nts.				
Tree Stratum (Plot size: 30 ft r	Absolute % Cover		ant Indicator	Dominance Test works	
1				Number of Dominant Spe That Are OBL, FACW, or	
2.				Total Number of Domina	
3				Species Across All Strata	•
4				Percent of Dominant Spe	ecies
Sapling/Shrub Stratum (Plot size: 15 ft r )		= Total	Cover	That Are OBL, FACW, or	
1				Prevalence Index works	
2.				Total % Cover of:	
3				OBL species 0 50	x 1 = 0
4					x 3 = $\frac{75}{}$
5				-	$x = \frac{1}{20}$
Hart Otation (District Eft r		_ = Total	Cover		x 5 = 0
Herb Stratum (Plot size: 5 ft r )  1. Phalaris arundinacea	50	~	FACW	Column Totals: 80	(A) 195 (B)
2 Alopecurus pratensis	<u>50</u> 25		FACW		( , ( ,
3. Pascopyrum smithii	_ <del>23</del>		FACU	Prevalence Index	
4				Hydrophytic Vegetation	
5.				1 - Rapid Test for Hy  ✓ 2 - Dominance Test	· · ·
6				3 - Prevalence Index	
7.					daptations <sup>1</sup> (Provide supporting
8.				data in Remarks	or on a separate sheet)
9				5 - Wetland Non-Vas	
10.					nytic Vegetation <sup>1</sup> (Explain)
11				<sup>1</sup> Indicators of hydric soil a be present, unless distur	and wetland hydrology must
Woody Vino Stratum (Plot size:	80	_= Total (	Cover	be present, unless distar	bed of problematic.
Woody Vine Stratum (Plot size:)  1				I leaden a beatin	
2.				Hydrophytic Vegetation	
				Present? Yes	No
% Bare Ground in Herb Stratum 20					
Remarks:					
Upland sample point dominated by ree	d canary	grass	s (Phalaris	arundinacea). Up	and status
determined by hydrology and soils.					

SOIL Sampling Point: DP06u

	Matrix		Redox Fea	tures			_	
(inches) Color (n			Color (moist) %	<u>6 Type<sup>1</sup> L</u>	_oc² Text		Remarks	
0 - 15 10YR 2/	1 10	00			Silt Lo	oam		
-								
			· ·					
_ <del>-</del>			·					
-								
¹Type: C=Concentration	D=Denletic	on RM=Red	luced Matrix CS=Cov	vered or Coated S	Sand Grains	<sup>2</sup> I ocation: P	L=Pore Lining,	M=Matrix
Hydric Soil Indicators:						dicators for Pr		
Histosol (A1)	`		Sandy Redox (S5)	•		2 cm Muck (A	-	
Histic Epipedon (A2)	)		Stripped Matrix (S6)		_	Red Parent N	•	
Black Histic (A3)	•		Loamy Mucky Minera	al (F1) (except MI	LRA 1)		Dark Surface (	TF12)
Hydrogen Sulfide (A	4)		Loamy Gleyed Matrix	(F2)		Other (Explai	n in Remarks)	
Depleted Below Dar			Depleted Matrix (F3)		•			
Thick Dark Surface			Redox Dark Surface	. ,	<sup>3</sup> lr	dicators of hyd	. , .	
Sandy Mucky Minera	, ,		Depleted Dark Surface			-	ogy must be pr	
Sandy Gleyed Matrix			Redox Depressions (	F8)	1	unless disturbe	ed or problemat	iiC.
Restrictive Layer (if pre								
,. <u> </u>							,	🗸
Depth (inches):			-		Hydri	c Soil Present	? Yes	No
Soil is very dry a	and no h	nydric s	oil indicators	were obse	rved.			
Soil is very dry a  HYDROLOGY  Wetland Hydrology Ind		nydric s	oil indicators	were obse	rved.			
IYDROLOGY	icators:			were obse	rved.	Secondary Ind	icators (2 or mo	re required)
IYDROLOGY Wetland Hydrology Ind	icators:		eck all that apply)	were obse		-	icators (2 or mo	
IYDROLOGY  Wetland Hydrology Ind  Primary Indicators (minir  Surface Water (A1)  High Water Table (A	icators: num of one i		eck all that apply)	eaves (B9) ( <b>exce</b>		-	ned Leaves (B	
IYDROLOGY Wetland Hydrology Ind Primary Indicators (minir Surface Water (A1)	icators: num of one i		eck all that apply) Water-Stained L MLRA 1, 2, 4 Salt Crust (B11)	eaves (B9) ( <b>exce</b>		Water-Stai	ned Leaves (B	
HYDROLOGY  Wetland Hydrology Ind  Primary Indicators (minir  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1)	icators: num of one i		eck all that apply)  Water-Stained L  MLRA 1, 2, 4  Salt Crust (B11)  Aquatic Inverteb	eaves (B9) ( <b>exce 4A, and 4B)</b> orates (B13)		Water-Stai  4A, and Drainage F	ned Leaves (B	9) (MLRA 1, 2,
IYDROLOGY  Wetland Hydrology Ind  Primary Indicators (minir  Surface Water (A1)  High Water Table (A  Saturation (A3)	icators: num of one i		eck all that apply) Water-Stained L MLRA 1, 2, 4 Salt Crust (B11)	eaves (B9) ( <b>exce 4A, and 4B)</b> orates (B13)		Water-Stai  4A, and Drainage F  Dry-Seaso	ned Leaves (B9 d 4B) Patterns (B10)	9) ( <b>MLRA 1, 2,</b> (C2)
HYDROLOGY  Wetland Hydrology Ind  Primary Indicators (minir  Surface Water (A1)  High Water Table (A  Saturation (A3)  Water Marks (B1)	icators: num of one i		eck all that apply)  Water-Stained L  MLRA 1, 2, 4  Salt Crust (B11)  Aquatic Inverted  Hydrogen Sulfid  Oxidized Rhizos	Leaves (B9) (exce 4A, and 4B) orates (B13) le Odor (C1) spheres along Livi	ept .	Water-Stai  4A, and Drainage F Dry-Seaso Saturation	ned Leaves (B9 d <b>4B)</b> Patterns (B10) n Water Table ( Visible on Aeria	(C2) (MLRA 1, 2, (C2) (C2) (C9)
Wetland Hydrology Ind Primary Indicators (minir Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (E	icators: mum of one i		eck all that apply)  Water-Stained L  MLRA 1, 2, 4  Salt Crust (B11)  Aquatic Inverteb  Hydrogen Sulfid  Oxidized Rhizos  Presence of Rec	Leaves (B9) (excelland 4B)  orates (B13)  e Odor (C1)  spheres along Lividuced Iron (C4)	ept ing Roots (C3)	Water-Stai  4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad	ned Leaves (BS 1 4B) Patterns (B10) n Water Table Visible on Aeria ic Position (D2) quitard (D3)	(C2) (MLRA 1, 2, (C2) (C2) (C9)
Wetland Hydrology Ind Primary Indicators (minir Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5)	icators: num of one i (2) (B2)		eck all that apply)  Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec	Leaves (B9) (excelland 4B)  Forates (B13)  Forates (C1)  Forates along Lividuced Iron (C4)  Stuction in Tilled Solution	ept ing Roots (C3) oils (C6)	Water-Stai  4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr	ned Leaves (BS 1 4B) Patterns (B10) n Water Table of Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5)	(C2) (Imagery (C9)
Wetland Hydrology Ind Primary Indicators (minin Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks	icators: num of one i 2) (B2) (B34) (B6)	required; ch	eck all that apply)  Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec	eaves (B9) (exce 4A, and 4B) orates (B13) e Odor (C1) spheres along Lividuced Iron (C4) duction in Tilled Sesed Plants (D1) (	ept ing Roots (C3) oils (C6) LRR A)	Water-Stai  4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised An	ned Leaves (BS d 4B) Patterns (B10) n Water Table ( Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) (	(C2) (C2) (C9) (LRR A)
Wetland Hydrology Ind Primary Indicators (minin Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Vis ble on	icators: num of one i 2) (B2) (B2) (B6) n Aerial Imag	required; ch	eck all that apply)  Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec	eaves (B9) (exce 4A, and 4B) orates (B13) e Odor (C1) spheres along Lividuced Iron (C4) duction in Tilled Sesed Plants (D1) (	ept ing Roots (C3) oils (C6) LRR A)	Water-Stai  4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr	ned Leaves (BS d 4B) Patterns (B10) n Water Table ( Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) (	(C2) (MLRA 1, 2, (C2) (C9) (LRR A)
Wetland Hydrology Ind Primary Indicators (minir Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Vis ble of Sparsely Vegetated	icators: num of one i 2) (B2) (B2) (B6) n Aerial Imag	required; ch	eck all that apply)  Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec	eaves (B9) (exce 4A, and 4B) orates (B13) e Odor (C1) spheres along Lividuced Iron (C4) duction in Tilled Sesed Plants (D1) (	ept ing Roots (C3) oils (C6) LRR A)	Water-Stai  4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised An	ned Leaves (BS d 4B) Patterns (B10) n Water Table ( Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) (	(C2) (MLRA 1, 2, (C2) (C9) (LRR A)
Wetland Hydrology Ind Primary Indicators (minir Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Vis ble of Sparsely Vegetated Field Observations:	icators: mum of one i  (B2)  (B2)  (B6) In Aerial Image Concave Su	required; ch	eck all that apply)  Water-Stained L  MLRA 1, 2, 4  Salt Crust (B11)  Aquatic Inverteb  Hydrogen Sulfid  Oxidized Rhizos  Presence of Rec  Recent Iron Rec  Stunted or Stres  Other (Explain in	Leaves (B9) (excelland) (excel	ept ing Roots (C3) oils (C6) LRR A)	Water-Stai  4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised An	ned Leaves (BS d 4B) Patterns (B10) n Water Table ( Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) (	(C2) (MLRA 1, 2, (C2) (C9) (LRR A)
Wetland Hydrology Ind Primary Indicators (minin Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Vis ble of Sparsely Vegetated Field Observations: Surface Water Present?	icators: num of one i 2) (B2) (B6) n Aerial Imag Concave Su	required; ch gery (B7) urface (B8)	eck all that apply)  Water-Stained L  MLRA 1, 2, 4  Salt Crust (B11)  Aquatic Inverteb  Hydrogen Sulfid  Oxidized Rhizos  Presence of Rec  Recent Iron Rec  Stunted or Stres  Other (Explain in	Leaves (B9) (excelland 4B)  Forates (B13)  Forates (B13)  Fore Odor (C1)  Spheres along Lividuced Iron (C4)  Suction in Tilled Sosed Plants (D1) (In Remarks)	ept ing Roots (C3) oils (C6) LRR A)	Water-Stai  4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised An	ned Leaves (BS d 4B) Patterns (B10) n Water Table ( Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) (	(C2) (C2) (C9) (LRR A)
Wetland Hydrology Ind Primary Indicators (minir Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Vis ble or Sparsely Vegetated Field Observations: Surface Water Present?	icators: num of one i  (B2)  (B2)  (B6) n Aerial Imag Concave Su  Yes _ Yes _	gery (B7) urface (B8) No _ No _	eck all that apply)  Water-Stained L  MLRA 1, 2, 4  Salt Crust (B11)  Aquatic Inverteb  Hydrogen Sulfid  Oxidized Rhizos  Presence of Rec  Recent Iron Rec  Stunted or Stres  Other (Explain in	eaves (B9) (exce 4A, and 4B) prates (B13) le Odor (C1) spheres along Lividuced Iron (C4) duction in Tilled Sesed Plants (D1) (in Remarks)	ept  ing Roots (C3)  oils (C6)  LRR A)	Water-Stai  4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised An Frost-Heav	ned Leaves (BS d 4B) Patterns (B10) n Water Table (Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) ve Hummocks (	(C2) (C2) (al Imagery (C9) (LRR A) (D7)
Wetland Hydrology Ind Primary Indicators (minir Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Vis ble or Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present?	icators: num of one i  (B2) (B2) (B6) n Aerial Imag Concave Su Yes Yes Yes Yes	gery (B7) urface (B8) No _ No _	eck all that apply)  Water-Stained L  MLRA 1, 2, 4  Salt Crust (B11)  Aquatic Inverteb  Hydrogen Sulfid  Oxidized Rhizos  Presence of Rec  Recent Iron Rec  Stunted or Stres  Other (Explain in	eaves (B9) (exce 4A, and 4B) prates (B13) le Odor (C1) spheres along Lividuced Iron (C4) duction in Tilled Sesed Plants (D1) (in Remarks)	ept  ing Roots (C3)  oils (C6)  LRR A)	Water-Stai  4A, and Drainage F Dry-Seaso Saturation Geomorph Shallow Ad FAC-Neutr Raised An	ned Leaves (BS d 4B) Patterns (B10) n Water Table (Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) ve Hummocks (	(C2) (C2) (al Imagery (C9) (LRR A) (D7)
Wetland Hydrology Ind Primary Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Vis ble of Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	icators: num of one i  (B2)  (B2)  (B6) n Aerial Imag Concave Su  Yes _ Yes _ Yes _ )	gery (B7) urface (B8) No _ No _ No _	eck all that apply)  Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres Other (Explain in	Leaves (B9) (excelland, and 4B)  Porates (B13)  The Odor (C1)  Spheres along Lividuced Iron (C4)  Suction in Tilled Sesed Plants (D1) (In Remarks)	ept ing Roots (C3) oils (C6) LRR A) Wetland Hyd	Water-Stai  4A, and  Drainage F  Dry-Seaso  Saturation  Geomorph Shallow Ad  FAC-Neutr  Raised An  Frost-Heav  rology Presen	ned Leaves (BS d 4B) Patterns (B10) n Water Table (Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) ve Hummocks (	(C2) (C2) (al Imagery (C9) (LRR A) (D7)
Wetland Hydrology Ind Primary Indicators (minir Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Vis ble or Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present?	icators: num of one i  (B2)  (B2)  (B6) n Aerial Imag Concave Su  Yes _ Yes _ Yes _ )	gery (B7) urface (B8) No _ No _ No _	eck all that apply)  Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres Other (Explain in	Leaves (B9) (excelland, and 4B)  Porates (B13)  The Odor (C1)  Spheres along Lividuced Iron (C4)  Suction in Tilled Sesed Plants (D1) (In Remarks)	ept ing Roots (C3) oils (C6) LRR A) Wetland Hyd	Water-Stai  4A, and  Drainage F  Dry-Seaso  Saturation  Geomorph Shallow Ad  FAC-Neutr  Raised An  Frost-Heav  rology Presen	ned Leaves (BS d 4B) Patterns (B10) n Water Table (Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) ve Hummocks (	(C2) (C2) (al Imagery (C9) (LRR A) (D7)
Wetland Hydrology Ind Primary Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Vis ble of Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data	icators: num of one i  (B2)  (B2)  (B6) n Aerial Imag Concave Su  Yes _ Yes _ Yes _ )	gery (B7) urface (B8) No _ No _ No _	eck all that apply)  Water-Stained L MLRA 1, 2, 4 Salt Crust (B11) Aquatic Inverteb Hydrogen Sulfid Oxidized Rhizos Presence of Rec Recent Iron Rec Stunted or Stres Other (Explain in	Leaves (B9) (excelland, and 4B)  Porates (B13)  The Odor (C1)  Spheres along Lividuced Iron (C4)  Suction in Tilled Sesed Plants (D1) (In Remarks)	ept ing Roots (C3) oils (C6) LRR A) Wetland Hyd	Water-Stai  4A, and  Drainage F  Dry-Seaso  Saturation  Geomorph Shallow Ad  FAC-Neutr  Raised An  Frost-Heav  rology Presen	ned Leaves (BS d 4B) Patterns (B10) n Water Table (Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) ve Hummocks (	(C2) (C2) (al Imagery (C9) (LRR A) (D7)
Wetland Hydrology Ind Primary Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Vis ble on Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data	icators: num of one i  (B2) (B34) (B6) n Aerial Imag Concave Su  Yes _ Yes _ Yes _ ) (stream gau	gery (B7) urface (B8) No _ No _ No _ uge, monitor	eck all that apply)  Water-Stained L  MLRA 1, 2, 4  Salt Crust (B11)  Aquatic Inverted  Hydrogen Sulfid  Oxidized Rhizos  Presence of Rec  Recent Iron Rec  Stunted or Stres  Other (Explain in	eaves (B9) (exce 4A, and 4B) orates (B13) le Odor (C1) spheres along Lividuced Iron (C4) duction in Tilled Sesed Plants (D1) ( in Remarks)	ept ing Roots (C3) oils (C6) LRR A) Wetland Hyd	Water-Stai  4A, and  Drainage F  Dry-Seaso  Saturation  Geomorph Shallow Ad  FAC-Neutr  Raised An  Frost-Heav  rology Presen	ned Leaves (BS d 4B) Patterns (B10) n Water Table (Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) ve Hummocks (	(C2) (C2) (al Imagery (C9) (LRR A) (D7)
Wetland Hydrology Ind Primary Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Vis ble of Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data	icators: num of one i  (B2) (B34) (B6) n Aerial Imag Concave Su  Yes _ Yes _ Yes _ ) (stream gau	gery (B7) urface (B8) No _ No _ No _ uge, monitor	eck all that apply)  Water-Stained L  MLRA 1, 2, 4  Salt Crust (B11)  Aquatic Inverted  Hydrogen Sulfid  Oxidized Rhizos  Presence of Rec  Recent Iron Rec  Stunted or Stres  Other (Explain in	eaves (B9) (exce 4A, and 4B) orates (B13) le Odor (C1) spheres along Lividuced Iron (C4) duction in Tilled Sessed Plants (D1) ( in Remarks)	ept ing Roots (C3) oils (C6) LRR A) Wetland Hyd	Water-Stai  4A, and  Drainage F  Dry-Seaso  Saturation  Geomorph Shallow Ad  FAC-Neutr  Raised An  Frost-Heav  rology Presen	ned Leaves (BS d 4B) Patterns (B10) n Water Table (Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) ve Hummocks (	(C2) (C2) (al Imagery (C9) (LRR A) (D7)
Wetland Hydrology Ind Primary Indicators (mining Surface Water (A1) High Water Table (A Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Algal Mat or Crust (B Iron Deposits (B5) Surface Soil Cracks Inundation Vis ble on Sparsely Vegetated Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data	icators: num of one i  (B2) (B34) (B6) n Aerial Imag Concave Su  Yes _ Yes _ Yes _ ) (stream gau	gery (B7) urface (B8) No _ No _ No _ uge, monitor	eck all that apply)  Water-Stained L  MLRA 1, 2, 4  Salt Crust (B11)  Aquatic Inverted  Hydrogen Sulfid  Oxidized Rhizos  Presence of Rec  Recent Iron Rec  Stunted or Stres  Other (Explain in	eaves (B9) (exce 4A, and 4B) orates (B13) le Odor (C1) spheres along Lividuced Iron (C4) duction in Tilled Sessed Plants (D1) ( in Remarks)	ept ing Roots (C3) oils (C6) LRR A) Wetland Hyd	Water-Stai  4A, and  Drainage F  Dry-Seaso  Saturation  Geomorph Shallow Ad  FAC-Neutr  Raised An  Frost-Heav  rology Presen	ned Leaves (BS d 4B) Patterns (B10) n Water Table (Visible on Aeria ic Position (D2) quitard (D3) ral Test (D5) t Mounds (D6) ve Hummocks (	(C2) (C2) (al Imagery (C9) (LRR A) (D7)

Project/Site: Schrieber Meadows	c	City/County	Lincoln	County	Sampling Date: 2024-07-16
Applicant/Owner: Montana Dept. of Transportation	1			State: Montana	Sampling Point: DP06w
Investigator(s): E Reynaud	8	Section, To	wnship, Ra	nge: S13 T27N R30V	V
Landform (hillslope, terrace, etc.): Floodplain	ا	Local relief	(concave,	convex, none): Concav	e Slope (%): 1
Subregion (LRR): E 43A	Lat: 48.	110294		Long: -115.414976	Datum: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly	drained			NWI classific	cation: PEM1C
Are climatic / hydrologic conditions on the site typical for this	time of yea				
Are Vegetation, Soil, or Hydrology signature.	gnificantly o	listurbed?	Are "	'Normal Circumstances" p	oresent? Yes No
Are Vegetation, Soil, or Hydrology na	aturally prob	olematic?	(If ne	eded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS - Attach site map s	howing	samplin	g point l	ocations, transects	, important features, etc.
Wetland Hydrology Present? Yes No Remarks:		with	e Sampled in a Wetlar		No
Data point taken at the bottom of larg	ge gent	le toes	lope.		
VEGETATION – Use scientific names of plant	s.				
20 ft "	% Cover	Species?	Status	Dominance Test work  Number of Dominant S That Are OBL, FACW,	pecies
2. 3.				Total Number of Domin Species Across All Stra	nant
4.				Percent of Dominant S	
Sapling/Shrub Stratum (Plot size: 15 ft r )		= Total Co	ver	That Are OBL, FACW,	or FAC: 100.00 (A/B)
1				Prevalence Index wor  Total % Cover of:	
2					$\frac{\text{Multiply by:}}{\text{x 1 = 25}}$
3				FACW species 75	x 2 = 150
4				FAC species 0	x 3 = 0
5					x 4 = 0
Herb Stratum (Plot size: 5 ft r		= Total Co	ver	UPL species 0	x 5 = 0
1. Phalaris arundinacea	75	~	FACW	Column Totals: 100	(A) <u>175</u> (B)
2. Carex pellita	25	~	OBL	Prevalence Index	= R/A = 1.75
3				Hydrophytic Vegetation	<del>-</del>
4				✓ 1 - Rapid Test for I	Hydrophytic Vegetation
5				✓ 2 - Dominance Tes	st 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-V	
10				=	phytic Vegetation <sup>1</sup> (Explain) il and wetland hydrology must
11	100			be present, unless dist	
Woody Vine Stratum (Plot size:)	100	= Total Cov	er/		
1				Hydrophytic	
2.				Vegetation	<b>V</b>
	:			Present? Ye	s No
% Bare Ground in Herb Stratum 0  Remarks:					
		••			
Evidence of hydrophytic vegetation incluprevalence index less than or equal to 3.	-	ositive	rapid te	est, a positive dor	ninance test, and a

US Army Corps of Engineers

SOIL Sampling Point: DP06w

Depth	Matrix	-	h needed to docui Redo	x Features		or commi	the absence	of indicators.)
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 - 9	10YR 2/2	100					Silt Loam	
9 - 16	10YR 7/1	100					Loamy Sand	
-								
_								
1 <sub>Type: C=C</sub>	ancontration D=D	onlotion DM-	Reduced Matrix, CS	S=Covered	d or Coate	d Sand Gr	nine <sup>2</sup> l oc	cation: PL=Pore Lining, M=Matrix.
			RRs, unless othe			u Sanu Gra		rs for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy Redox (		,			n Muck (A10)
	oipedon (A2)	-	Stripped Matrix					Parent Material (TF2)
	stic (A3)	- -	Loamy Mucky I		l) (excep	MLRA 1)		/ Shallow Dark Surface (TF12)
Hydroge	en Sulfide (A4)		Loamy Gleyed			,		er (Explain in Remarks)
Deplete	d Below Dark Surfa	ace (A11)	Depleted Matrix	k (F3)				•
	ark Surface (A12)	-	Redox Dark Su	` ,				rs of hydrophytic vegetation and
	lucky Mineral (S1)	<del>-</del>	Depleted Dark	•	7)			nd hydrology must be present,
	Bleyed Matrix (S4)		Redox Depress	sions (F8)			unles	s disturbed or problematic.
	Layer (if present):							
								- ·- · · · ·
Depth (in	ches):						Hydric Soil	Present? Yes No
HYDROLO	GY							
	drology Indicator	c·						
•	•		; check all that appl	v)			Secon	ndary Indicators (2 or more required)
	Water (A1)	r one required	Water-Sta	•	ac (BQ) ( <b>a</b>	vcent		/ater-Stained Leaves (B9) (MLRA 1, 2,
	ater Table (A2)			1, 2, 4A, a		xcept		4A, and 4B)
Saturation	, ,		Salt Crust		a 40)		D	rainage Patterns (B10)
Water M	` '		Aquatic In	` ,	s (B13)			ry-Season Water Table (C2)
	nt Deposits (B2)		Hydrogen					aturation Visible on Aerial Imagery (C9)
	posits (B3)					Living Root		eomorphic Position (D2)
	at or Crust (B4)		Presence		_	_	· · —	hallow Aquitard (D3)
_	oosits (B5)					d Soils (C6)		AC-Neutral Test (D5)
	Soil Cracks (B6)		Stunted or					aised Ant Mounds (D6) (LRR A)
	on Vis ble on Aeria	al Imagery (B7						rost-Heave Hummocks (D7)
Sparsely	Vegetated Conca	ave Surface (B	8)					
Field Obser	vations:							
Surface Wat	er Present?	Yes N	lo <u> </u>	ches):				
Water Table	Present?	Yes N	lo <u> </u>	ches):				
Saturation P	resent?		lo Depth (in			l l	ınd Hydrology	y Present? Yes V No No
(includes car				·			£! - -	
Describe Re	corded Data (strea	ırıı gauge, moı	nitoring well, aerial	priotos, pr	evious ins	spections), i	i avaliable:	
Remarks:								
	o of wotlon	d bydrala	av includes	acom	ornhia	nositi	on and a	positivo EAC Noutral
	e or wetiant	a riyurolo	gy includes	geom	orbine	positio	JII allu a	positive FAC-Neutral
test.								

Project/Site: Schrieber Meadows	Ci	ty/County:	Lincoln (	County	Sampling Date: 2024-07-16
Applicant/Owner: Montana Dept. of Transportation	l			State: Montana	Sampling Point: DP07u
Investigator(s): R Baumgarten	Se	ection, Tow	vnship, Rar	nge: S12 T27N R30W	<u> </u>
Landform (hillslope, terrace, etc.): Terrace/floodplain					
Subregion (LRR): E 43A	Lat: 48.1	12238		Long: -115.417798	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 year				
Are Vegetation, Soil, or Hydrology si	gnificantly di	sturbed?	Are "I	Normal Circumstances" p	oresent? Yes No
Are Vegetation, Soil, or Hydrology na	aturally probl	ematic?	(If ne	eded, explain any answer	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	showing s	ampling	j point lo	ocations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No				_	
Hydric Soil Present? Yes No		II.	Sampled n a Wetlan		No
Wetland Hydrology Present? Yes No Remarks:					
		-1	41		
Upland data point near the middle of	tne site	along	tne we	stern project bo	oundary.
VEGETATION – Use scientific names of plant	s.				
Tree Stratum (Plot size: 30 ft r		Dominant		Dominance Test work	sheet:
1	% Cover			Number of Dominant Sp That Are OBL, FACW, of	
2.					(rt)
3.				Total Number of Domin- Species Across All Stra	^
4				Percent of Dominant Sp	necies
Sapling/Shrub Stratum (Plot size: 15 ft r )	=	Total Cov	er	That Are OBL, FACW, of	
1			ļ	Prevalence Index work	ksheet:
2.					Multiply by:
3.				-	x 1 = 0
4.				^7	$\times 2 = \frac{2}{91}$
5.				FAC species 27	x 3 = 81
	=	: Total Cov	er		x 4 = 240
Herb Stratum (Plot size: 5 ft r )				*	x = 0
1. Pascopyrum smithii	60		FACU	Column Totals: 88	(A) <u>323</u> (B)
2. Alopecurus pratensis	25		FAC	Prevalence Index	
3. Cirsium arvense 4 Phalaris arundinacea	<u>2</u>		FAC	Hydrophytic Vegetation	
···			FACW_	1 - Rapid Test for H	
5				2 - Dominance Tes	4
6				3 - Prevalence Inde	
7				4 - Morphological A	Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)
8				5 - Wetland Non-Va	' '
9					ohytic Vegetation¹ (Explain)
10 11					I and wetland hydrology must
	00	Total Cove		be present, unless distu	
Woody Vine Stratum (Plot size:)		Total Cove	′'		
1				Hydrophytic	
2				Vegetation	s No
W Para Cround in Horb Stratum 12	=	Total Cove	er e	Present? Yes	> NU
% Bare Ground in Herb Stratum 12 Remarks:				<u> </u>	
No indicators met for hydrophytic ve	getation	1			
	gotatioi	••			

SOIL Sampling Point: DP07u

Depth	<u>Matrix</u>		Redox Features		
(inches)	Color (moist)	%	Color (moist) % Type <sup>1</sup> Lo	c <sup>2</sup> Texture	Remarks
0 - 15	10YR 2/2	100		Sandy Loam	
-					
				<del></del>	
-					
-					
_					
1T C-C-		- DM	- Dadward Matrix CC-Covered on Control Co	21	etien. DI -Dans Lining M-Matrix
			-Reduced Matrix, CS=Covered or Coated Sa LRRs, unless otherwise noted.)		ation: PL=Pore Lining, M=Matrix.  rs for Problematic Hydric Soils <sup>3</sup> :
•	`	Cable to all	•		•
Histosol (	ipedon (A2)		Sandy Redox (S5) Stripped Matrix (S6)		Muck (A10) Parent Material (TF2)
Black His			Loamy Mucky Mineral (F1) (except MLI		Shallow Dark Surface (TF12)
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)		r (Explain in Remarks)
	Below Dark Surfa	ce (A11)	Depleted Matrix (F3)	_	( ) /
	rk Surface (A12)	, ,	Redox Dark Surface (F6)	<sup>3</sup> Indicato	rs of hydrophytic vegetation and
Sandy M	ucky Mineral (S1)		Depleted Dark Surface (F7)	wetlar	nd hydrology must be present,
	eyed Matrix (S4)		Redox Depressions (F8)	unless	s disturbed or problematic.
Restrictive L	ayer (if present):				
Type:					
Depth (inc	hes):			Hydric Soil	Present? Yes No
	c soil indica	tors ob	served.		
		tors ob	served.		
No hydrid	gY .		served.		
No hydrid	GY Irology Indicators	s:		0	dan Judianton (O an mana may incl)
No hydrid  IYDROLOG  Wetland Hyd  Primary Indica	GY Irology Indicators ators (minimum of	s:	d; check all that apply)		dary Indicators (2 or more required)
No hydric  IYDROLOG  Wetland Hyd  Primary Indicate  Surface \	GY Irology Indicators ators (minimum of Water (A1)	s:	d; check all that apply) Water-Stained Leaves (B9) ( <b>excep</b>		ater-Stained Leaves (B9) (MLRA 1, 2,
No hydric  IYDROLOG  Wetland Hyd  Primary Indica  Surface N  High Wat	GY rology Indicators ators (minimum of Water (A1) rer Table (A2)	s:	d; check all that apply) Water-Stained Leaves (B9) (excep	W	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
No hydrid  IYDROLOG  Wetland Hyd  Primary Indica  Surface N  High Wat  Saturatio	rology Indicators ators (minimum of Water (A1) er Table (A2) n (A3)	s:	d; check all that apply)  Water-Stained Leaves (B9) (excep  MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)	W	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10)
No hydrid  IYDROLOG  Wetland Hyd  Primary Indica  Surface No  High Wat  Saturatio  Water Ma	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1)	s:	d; check all that apply)  Water-Stained Leaves (B9) (excep  MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)  Aquatic Invertebrates (B13)	W Di Di	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2)
No hydrid  IYDROLOG  Wetland Hyd  Primary Indica  Surface N  High Wat  Saturatio  Water Ma  Sedimen	Irology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2)	s:	d; check all that apply)  Water-Stained Leaves (B9) (exception of the property of the prop	W DI DI Sa	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9
No hydrid  IYDROLOG  Wetland Hyd  Primary Indica  Surface N  High Wat  Saturatio  Water Ma  Sedimen  Drift Dep	rology Indicators ators (minimum of Nater (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3)	s:	d; check all that apply)  Water-Stained Leaves (B9) (excep	W Di Di Sa g Roots (C3) G	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2)
No hydrid  IYDROLOG  Wetland Hyd  Primary Indica  Surface N  High Wat  Saturatio  Water Ma  Sedimen  Drift Dep  Algal Mat	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4)	s:	d; check all that apply)  — Water-Stained Leaves (B9) (exception of the content o	W Di Si g Roots (C3) Gi	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3)
No hydric  IYDROLOG  Wetland Hyd  Primary Indica  Surface N  High Wat  Saturatio  Water Ma  Sedimen  Drift Dep  Algal Mat	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5)	s:	d; check all that apply)  Water-Stained Leaves (B9) (exception of the content of	yt W Di Di Si g Roots (C3) Gi Sl Is (C6) F/	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5)
No hydric  IYDROLOG  Wetland Hyd  Primary Indica  Surface Na  High Wat  Saturatio  Water Ma  Sedimen  Drift Dep  Algal Mat  Iron Depo	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6)	s: one require	d; check all that apply)  — Water-Stained Leaves (B9) (exception of the property of the proper	yt W Di Di Si g Roots (C3) G Si ls (C6) F/ RR A) Ri	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
No hydric  IYDROLOG  Wetland Hyd  Primary Indic  Surface N  High Wat  Saturatio  Water Ma  Sedimen  Drift Dep  Algal Mat  Iron Depo  Surface S  Inundation	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aeria	one require	d; check all that apply)  Water-Stained Leaves (B9) (except 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 Soi  Stunted or Stressed Plants (D1) (L	yt W Di Di Si g Roots (C3) G Si ls (C6) F/ RR A) Ri	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5)
No hydric  IYDROLOG  Wetland Hyd  Primary Indica  Surface N  High Wat  Saturatio  Water Ma  Sedimen  Drift Dep  Algal Mat  Iron Depr  Surface S  Inundatio  Sparsely	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aeria Vegetated Conca	one require	d; check all that apply)  Water-Stained Leaves (B9) (except 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 Soi  Stunted or Stressed Plants (D1) (L	yt W Di Di Si g Roots (C3) G Si ls (C6) F/ RR A) Ri	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
No hydrid  IYDROLOG  Wetland Hyd  Primary Indica  Surface N  High Wat  Saturatio  Water Ma  Sedimen  Drift Dep  Algal Mat  Iron Depo  Surface S  Inundatio  Sparsely  Field Observ	rology Indicators ators (minimum of Vater (A1) ter Table (A2) to (A3) to Deposits (B1) to Deposits (B2) to r Crust (B4) to r Crust (B4) to sits (B5) Soil Cracks (B6) to Vis ble on Aeria Vegetated Conca	one required Imagery (B	d; check all that apply)  — Water-Stained Leaves (B9) (except 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 Soi  — Stunted or Stressed Plants (D1) (L7)  — Other (Explain in Remarks)	yt W Di Di Si g Roots (C3) G Si ls (C6) F/ RR A) Ri	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
No hydric  IYDROLOG  Wetland Hyd  Primary Indic:  Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely  Field Observ Surface Wate	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aeria Vegetated Conca vations: or Present?	one required Imagery (B	d; check all that apply)  — Water-Stained Leaves (B9) (exception 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 Soi — Stunted or Stressed Plants (D1) (Lace)  7) — Other (Explain in Remarks)  88)	yt W Di Di Si g Roots (C3) G Si ls (C6) F/ RR A) Ri	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
No hydric  IYDROLOG  Wetland Hyd  Primary Indic  Surface N  High Wat  Saturatio  Water Ma  Sedimen  Drift Dep  Algal Mat  Iron Depo  Surface S  Inundatio  Sparsely  Field Observ  Surface Water	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) tor Crust (B4) tor Crust (B4) tor Crust (B6) n Vis ble on Aeria Vegetated Conca ations: or Present?	one required Imagery (B ve Surface ( Yes	d; check all that apply)  Water-Stained Leaves (B9) (except 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 Soi  Stunted or Stressed Plants (D1) (L  Other (Explain in Remarks)  No  Depth (inches):  Depth (inches):	yt W W Di Si Si Si Si Si Fr RR A) Fr	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
No hydric  IYDROLOG  Wetland Hyd  Primary Indica Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely  Field Observ  Surface Water  Water Table If Saturation Pro	rology Indicators ators (minimum of Water (A1) ter Table (A2) n (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) on Vis ble on Aeria Vegetated Conca vations: or Present? Present?	one required Imagery (B ve Surface ( Yes	d; check all that apply)  Water-Stained Leaves (B9) (except 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 Soi Stunted or Stressed Plants (D1) (L7)  Other (Explain in Remarks)  No Depth (inches):  Depth (inches):	yt W W Di Si Si Si Si Si Fr RR A) Fr	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A)
No hydric  IYDROLOG  Wetland Hyd  Primary Indic:  Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely  Field Observ  Surface Water Water Table If Saturation Pro (includes cap	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca rations: ar Present? Present? esent? esent? elilary fringe)	one required Imagery (B ve Surface ( Yes Yes Yes	d; check all that apply)  — Water-Stained Leaves (B9) (exception 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 Soi — Stunted or Stressed Plants (D1) (Later of the Companies	## W ##	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
No hydric  IYDROLOG  Wetland Hyd  Primary Indic:  Surface N High Wat Saturatio Water Ma Sedimen Drift Dep Algal Mat Iron Depo Surface S Inundatio Sparsely  Field Observ  Surface Water Water Table If Saturation Pro (includes cap	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca rations: ar Present? Present? esent? esent? elilary fringe)	one required Imagery (B ve Surface ( Yes Yes Yes	d; check all that apply)  Water-Stained Leaves (B9) (except 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 Soi  Stunted or Stressed Plants (D1) (L  Other (Explain in Remarks)  No  Depth (inches):  Depth (inches):	## W ##	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
No hydric  IYDROLOG  Wetland Hyd  Primary Indica  Surface N  High Wat  Saturatio  Water Ma  Sedimen  Drift Dep  Algal Mat  Iron Depo  Surface S  Inundatio  Sparsely  Field Observ  Surface Water  Water Table R  Saturation Pro  (includes cap  Describe Rec	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca rations: ar Present? Present? esent? esent? elilary fringe)	one required Imagery (B ve Surface ( Yes Yes Yes	d; check all that apply)  — Water-Stained Leaves (B9) (exception 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 Soi — Stunted or Stressed Plants (D1) (Later of the Companies	## W ##	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
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No hydric  IYDROLOG  Wetland Hyd  Primary Indica  Surface Note of the second se	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca vations: ar Present? Present? esent? elilary fringe) orded Data (strean	one required Imagery (B we Surface ( Yes Yes Yes m gauge, mo	d; check all that apply)  — Water-Stained Leaves (B9) (exception 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 Soi — Stunted or Stressed Plants (D1) (Later of the Companies	## W ##	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)
No hydric  IYDROLOG  Wetland Hyd  Primary Indica  Surface Note of the second se	rology Indicators ators (minimum of Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) Soil Cracks (B6) in Vis ble on Aeria Vegetated Conca vations: ar Present? Present? esent? elilary fringe) orded Data (strean	one required Imagery (B we Surface ( Yes Yes Yes m gauge, mo	d; check all that apply)  — Water-Stained Leaves (B9) (exception 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 Soi — Stunted or Stressed Plants (D1) (L)  7) — Other (Explain in Remarks)  B8)  No	## W ##	ater-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) rainage Patterns (B10) ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) nallow Aquitard (D3) AC-Neutral Test (D5) aised Ant Mounds (D6) (LRR A) ost-Heave Hummocks (D7)

Project/Site: Schrieber Meadows	C	ity/Coun	<sub>ity:</sub> Lincoln (	County	Sampling Date: _	2024-07-16
Applicant/Owner: Montana Dept. of Transportation				State: Montana		
Investigator(s): E Reynaud	S	Section, T	Γownship, Rar	nge: S12 T27N R30W	<i>I</i>	
Landform (hillslope, terrace, etc.): Toeslope						oe (%): 1
Subregion (LRR): E 43A	Lat: 48.1	112219		Long: -115.41774	Datu	m: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poorly						
Are climatic / hydrologic conditions on the site typical for th	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				ocations, transects	, important fe	atures, etc.
Hydrophytic Vegetation Present? Yes N	No					
	No		the Sampled	Area		
	No	Wit	thin a Wetlan	id? Yes	No	•
Remarks:						
Data point taken near western borde	er of site	·.				
VEGETATION – Use scientific names of plan	nts.					
Tree Stratum (Plot size: 30 ft r	Absolute % Cover		nt Indicator	Dominance Test work		
1				Number of Dominant Sp That Are OBL, FACW, of		(A)
2.						
3				Total Number of Domin Species Across All Stra		(B)
4				Percent of Dominant Sp	necies	
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total C	Cover	That Are OBL, FACW,		(A/B)
				Prevalence Index wor	ksheet:	
1 2				Total % Cover of:		y by:
3.					x 1 = 0	
4.				FACW species 95		<u> </u>
5					x 3 = 15	
		= Total C	Cover	_	x 4 = 0	
Herb Stratum (Plot size: 5 ft r					x 5 = 0	
1. Phalaris arundinacea			FACW	Column Totals: 100	(A) <u>205</u>	(B)
2. Cirsium arvense			FAC_	Prevalence Index		
3				Hydrophytic Vegetation		
4				1 - Rapid Test for H		ation
5				∠ 2 - Dominance Tes		
6				✓ 3 - Prevalence Inde		
7 8				4 - Morphological A data in Remarks	daptations (Provi	ide suppoπing sheet)
9.				5 - Wetland Non-Va	ascular Plants <sup>1</sup>	•
10.				Problematic Hydro		(Explain)
11.				<sup>1</sup> Indicators of hydric soi		
	400	= Total C	over	be present, unless distu	irbed or problemat	tic.
Woody Vine Stratum (Plot size:)						
1				Hydrophytic		
2				Vegetation Present? Yes	s No	
% Bare Ground in Herb Stratum 0	=					_ <del>_</del>
Remarks:						
Evidence of hydrophytic vegetation inc	ludes a p	ositiv	e rapid te	st, a positive don	ninance test	, and a
prevalence index less than or equal to 3	-		-	-		

US Army Corps of Engineers

SOIL Sampling Point: DP07w

inches) 0 - 13	Color (moist)	%	( <u>:</u> OlO:	(moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0 10	10YR 2/1	95	10YR		5	C	M	Loam	romano
12 16	10YR 6/1	100	10111	+, 0				Loamy Sand	
13 - 16	101 K 0/1	_ 100				_		Loanly Sand	-
			<u> </u>		<u> </u>				
-									
_									
			-						
-								-	
ype: C=Co	ncentration, D=D	epletion, R	M=Reduce	d Matrix, CS	S=Covere	ed or Coate	ed Sand Gra	ains. <sup>2</sup> Lo	cation: PL=Pore Lining, M=Matrix.
dric Soil Ir	ndicators: (App	licable to a	II LRRs, u	nless other	rwise no	ted.)		Indicate	ors for Problematic Hydric Soils <sup>3</sup> :
Histosol (	(A1)		San	dy Redox (S	S5)			2 c	m Muck (A10)
Histic Epi	ipedon (A2)		Stri	oped Matrix	(S6)			Re	d Parent Material (TF2)
_ Black His	` '			my Mucky N			t MLRA 1)	Ver	ry Shallow Dark Surface (TF12)
	n Sulfide (A4)			my Gleyed		2)		Oth	ner (Explain in Remarks)
	Below Dark Surf	ace (A11)		leted Matrix	` ,			3	
_	rk Surface (A12)			lox Dark Su	•	,			ors of hydrophytic vegetation and
-	ucky Mineral (S1 leyed Matrix (S4)			leted Dark S lox Depress		. ,			and hydrology must be present, ss disturbed or problematic.
	ayer (if present)		Rec	iox Depiess	SIUIIS (FO	)		T	ss disturbed or problematic.
туре									
D 41- //1	L V.							Hyaric Soi	l Present? Yes No
ominer	nt redoxim	orphic (	concen	trations	s with	nin the	matrix.		
ominer	nt redoxim		concen	trations	s with	in the	matrix.	1 -	
emarks:  Ominer  DROLOG  etland Hyd	nt redoximo	rs:				nin the	matrix.		ondary Indicators (2 or more required)
ominer  DROLOC  etland Hyd  imary Indica	nt redoximo	rs:			y)			Secco	ondary Indicators (2 or more required) Water-Stained Leaves (B9) ( <b>MLRA 1, 2</b>
DROLOC etland Hyd imary Indica Surface V	nt redoximo	rs:		all that appl Water-Sta	y) ined Lea			Secco	
DROLOC etland Hyd imary Indica Surface V High Wat	Tredoximos  GY  Irology Indicator ators (minimum of Water (A1) arr Table (A2)	rs:		all that appl Water-Sta	y) ined Lea 1, 2, 4A,	ves (B9) ( <b>6</b>		Secc	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
DROLOC etland Hyd imary Indica Surface V High Wat	at redoximo	rs:	red; check 	all that appl Water-Sta MLRA	y) ined Lea <b>1, 2, 4A,</b> (B11)	ves (B9) ( <b>e</b> <b>and 4B)</b>		Secc	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
DROLOC etland Hyd imary Indica Surface V High Wat Saturation Water Ma	at redoximo	rs:	red; check 	all that appl Water-Sta <b>MLRA</b> Salt Crust	y) ined Lea <b>1, 2, 4A,</b> (B11) vertebrat	ves (B9) (e and 4B)		Seco \ [ [	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
DROLOC etland Hyd imary Indica Surface V High Wat Saturation Water Ma Sediment	arks (B1)	rs:	red; check 	all that appl Water-Sta <b>MLRA</b> Salt Crust Aquatic In Hydrogen	y) ined Lea <b>1, 2, 4A,</b> (B11) vertebrat Sulfide (	ves (B9) ( <b>and 4B)</b> ses (B13) Odor (C1)		Secc \ [ [	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
DROLOC etland Hyd imary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo	redoximos  redoximos  rology Indicator ators (minimum content (A1) ater (A1) ater Table (A2) arks (B1) at Deposits (B2)	rs:	red; check 	all that appl Water-Sta <b>MLRA</b> Salt Crust Aquatic In Hydrogen	y) ined Lea <b>1, 2, 4A,</b> (B11) vertebrat Sulfide ( Rhizosph	ves (B9) (e and 4B) tes (B13) Odor (C1) eres along	except Living Roo	Secco	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Orainage Patterns (B10) Ory-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9
COMINER COMINE	redoxime  architecture  archit	rs:	red; check 	all that appl Water-Sta MLRA Salt Crust Aquatic Int Hydrogen Oxidized F Presence	y) ined Lea <b>1, 2, 4A,</b> (B11) vertebrat Sulfide ( Rhizosph of Reduc	ves (B9) (e and 4B)  tes (B13) Odor (C1) eres along ted Iron (C	except Living Roo	Secco	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
CDROLOC etland Hyd imary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo	redoxime  architecture  archit	rs:	red; check 	all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	y) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc	ves (B9) (e and 4B)  des (B13)  Odor (C1) eres along ded Iron (C) tion in Tille	except Living Roo 4)	Seco \ [ [ S ts (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
CDROLOC etland Hyd imary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depor Algal Mat Iron Depor	redoximon redoxi	's: f one requi	red; check	all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro	y) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc	ves (B9) (e and 4B)  des (B13)  Odor (C1)  eres along  ded Iron (C  tion in Tille  d Plants (E	except  Living Roo 4) d Soils (C6	Secondary (1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
DROLOC etland Hyd imary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio	redoximont	s: f one requi	red; check	all that appl Water-Stai MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	y) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc	ves (B9) (e and 4B)  des (B13)  Odor (C1)  eres along  ded Iron (C  tion in Tille  d Plants (E	except  Living Roo 4) d Soils (C6	Secondary (1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-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)
DROLOC etland Hyd imary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio	redoximon redoxi	s: f one requi	red; check	all that appl Water-Stai MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	y) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduc	ves (B9) (e and 4B)  des (B13)  Odor (C1)  eres along  ded Iron (C  tion in Tille  d Plants (E	except  Living Roo 4) d Soils (C6	Secondary (1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-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)
DROLOC etland Hyd imary Indica Surface V High Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely	redoximonatore (A1) for Table (A2) for (A3) for (B1) for Table (A2) for (A3) for (B1) for Crust (B4) for Crust (B4) for Crust (B4) for Crust (B6) for Vis ble on Aeric for Vegetated Conceptations:	f one required in the second s	B7)	all that appl Water-Stai MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or	y) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide C Rhizosph of Reduc on Reduc r Stresse	ves (B9) (e and 4B)  es (B13)  Odor (C1)  eres along  ed Iron (C  tion in Tille  d Plants (E  emarks)	except  Living Roo 4) d Soils (C6	Secondary (1)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-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)
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DROLOC etland Hyd imary Indica Surface V High Wat Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatio Sparsely eld Observ urface Wate ater Table F	redoximonatore (minimum of the control of the contr	al Imagery ( ave Surface  Yes Yes Yes	B7) (B8) No No	all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	y) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduce on Reduce on Stresse plain in Re ches): ches): ches): _5	ves (B9) (e and 4B) ees (B13) Odor (C1) eres along eed Iron (C tion in Tille d Plants (E temarks)	Living Roo 4) d Soils (C6 01) (LRR A)	Second   S	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-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)
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Properties of the control of the con	redoximonatore (minimum of the control of the contr	al Imagery ( ave Surface  Yes Yes Yes	B7) (B8) No No	all that appl Water-Sta MLRA Salt Crust Aquatic In Hydrogen Oxidized F Presence Recent Iro Stunted or Other (Exp	y) ined Lea 1, 2, 4A, (B11) vertebrat Sulfide ( Rhizosph of Reduce on Reduce on Stresse plain in Re ches): ches): ches): _5	ves (B9) (e and 4B) ees (B13) Odor (C1) eres along eed Iron (C tion in Tille d Plants (E temarks)	Living Roo 4) d Soils (C6 01) (LRR A)	Second   S	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-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 Meadows	C	ity/County:	Lincoln (	County	Sampling Date: 2024-07-16
Applicant/Owner: Montana Dept. of Transportation	1			State: Montana	Sampling Point: DP08u
Investigator(s): R Baumgarten	S	ection, Tov	vnship, Rar	nge: S11 T27N R30W	
				=	Slope (%): 1
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 Hydrology si	-				resent? Yes No
Are Vegetation, Soil, or Hydrology na				eded, explain any answer	
SUMMARY OF FINDINGS – Attach site map s					
Hydrophytic Vegetation Present? Yes No			, po		, p o
Hydric Soil Present? Yes No		Is the	e Sampled		
Wetland Hydrology Present? Yes No	· ·	withi	n a Wetlan	d? Yes	No
Remarks:		I.			
Upland data point located towards th	e north	west e	end of t	the site.	
VEGETATION – Use scientific names of plant		Daminant	la di a atau	Deminence Test week	ah a ati
Tree Stratum (Plot size: 30 ft r	Absolute % Cover	Dominant Species?		Dominance Test works  Number of Dominant St	
1				That Are OBL, FACW, of	• • • • •
2				Total Number of Domina	ant
3				Species Across All Stra	4
4				Percent of Dominant Sp	pecies
Sapling/Shrub Stratum (Plot size: 15 ft r )	=	= Total Cov	⁄er	That Are OBL, FACW, o	
1				Prevalence Index worl	
2.				Total % Cover of:	
3				OBL species 0 FACW species 5	$x 1 = \frac{0}{10}$
4				FAC species 6	x 3 = 18
5				· ·	x 4 = 304
Herb Stratum (Plot size: 5 ft r )		= Total Cov	⁄er	· ·	x 5 = 0
1. Pascopyrum smithii	75	~	FACU	Column Totals: 87	(A) <u>332</u> (B)
2. Alopecurus pratensis	5		FAC	Prevalence Index	= R/Δ = 3.81
3. Phalaris arundinacea	5		FACW	Hydrophytic Vegetation	
4. Cirsium arvense	1		FAC	1 - Rapid Test for H	
5. Prunella vulgaris	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 s or on a separate sheet)
8				5 - Wetland Non-Va	· · · · · · · · · · · · · · · · · · ·
9					ohytic Vegetation¹ (Explain)
10 11				l <del></del>	I and wetland hydrology must
	0.7	Total Cov	er	be present, unless distu	
Woody Vine Stratum (Plot size:)					
1				Hydrophytic	
2				Vegetation   Present? Yes	s No
% Bare Ground in Herb Stratum 13	=	lotal Cov	er		
Remarks:				<u>I</u>	
No indicators met for hydrophytic ve	getatior	າ.			

SOIL Sampling Point: DP08u

Depth _	Matrix		Redox Features		
(inches)	Color (moist)	%	Color (moist) % Type <sup>1</sup> Lo	Texture	Remarks
0 - 15	10YR 2/2	100		<u>Loam</u>	
-					
-					
1Type: C=Cen	acontration D=Do	olotion DM=	Paduand Matrix, CS=Covered or Costed So	and Craina 21	ocation: DI =Doro Lining M=Matrix
			Reduced Matrix, CS=Covered or Coated Sa RRs, unless otherwise noted.)		ocation: PL=Pore Lining, M=Matrix. tors for Problematic Hydric Soils <sup>3</sup> :
Histosol (/	`	Jabie to all L	Sandy Redox (S5)		cm Muck (A10)
	pedon (A2)	=	Stripped Matrix (S6)		ed Parent Material (TF2)
Black Hist		_	Surpped Matrix (30) Loamy Mucky Mineral (F1) ( <b>except MLF</b>		ery Shallow Dark Surface (TF12)
	Sulfide (A4)	_	Loamy Gleyed Matrix (F2)		ther (Explain in Remarks)
	Below Dark Surfa	ce (A11)	Depleted Matrix (F3)	•	. , /
	k Surface (A12)	`	Redox Dark Surface (F6)	<sup>3</sup> Indica	tors of hydrophytic vegetation and
Sandy Mu	ıcky Mineral (S1)	=	Depleted Dark Surface (F7)	wet	land hydrology must be present,
	eyed Matrix (S4)	_	Redox Depressions (F8)	unl	ess disturbed or problematic.
Restrictive La	ayer (if present):				
Туре:			<u> </u>		
Depth (inch	nes):			Hydric Sc	oil Present? Yes No
	soil indica	tors obs	erved.	·	
		tors obs	erved.		
No hydric	SY		erved.		
No hydric	6Y rology Indicators	:		Society	ondany Indicators (2 or more required)
No hydric  HYDROLOG  Wetland Hydr  Primary Indica	SY rology Indicators ttors (minimum of	:	check all that apply)		ondary Indicators (2 or more required)
No hydric  YDROLOG  Wetland Hydr  Primary Indica  Surface W	rology Indicators stors (minimum of	:	check all that apply) Water-Stained Leaves (B9) (excep		Water-Stained Leaves (B9) (MLRA 1, 2,
No hydric  YDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate	rology Indicators stors (minimum of Vater (A1) er Table (A2)	:	check all that apply) Water-Stained Leaves (B9) (excep	<u></u>	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
No hydric  IYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturation	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3)	:	check all that apply)  Water-Stained Leaves (B9) (excep  MLRA 1, 2, 4A, and 4B)  Salt Crust (B11)		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10)
No hydric  IYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate  Saturatior  Water Ma	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1)	:	check all that apply)  Water-Stained Leaves (B9) (excep		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2)
No hydric  HYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate  Saturation  Water Ma  Sediment	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2)	:	check all that apply)  Water-Stained Leaves (B9) (excep		Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9
No hydric  IYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate  Saturatior  Water Ma  Sediment  Drift Depo	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3)	:	check all that apply)  Water-Stained Leaves (B9) (excep	g Roots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2)
Wetland Hydr Primary Indica Surface W High Wate Saturatior Water Ma Sediment Drift Depo	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4)	:	check all that apply)  Water-Stained Leaves (B9) (excep	g Roots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3)
No hydric  IYDROLOG  Wetland Hydr  Primary Indica  Surface W High Wate Saturatior Water Ma Sediment Drift Depo Algal Mat Iron Depo	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5)	:	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 Livin  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soi	g Roots (C3)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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No hydric  IYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Wate  Saturation  Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo  Surface S  Inundation	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) osits (B5) n Vis ble on Aerial	: one required;	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 Livin  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soi  Stunted or Stressed Plants (D1) (L	g Roots (C3) lls (C6) RR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
No hydric  IYDROLOG  Wetland Hydr  Primary Indica  Surface W  High Water  Saturatior  Water Ma  Sediment  Drift Depo  Algal Mat  Iron Depo  Surface S  Inundatior  Sparsely	rology Indicators stors (minimum of Vater (A1) er Table (A2) n (A3) rks (B1) Deposits (B2) osits (B3) or Crust (B4) esits (B5) oil Cracks (B6) n Vis ble on Aerial Vegetated Concav	: one required;	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 Livin  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soi  Stunted or Stressed Plants (D1) (L	g Roots (C3) lls (C6) RR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-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)
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Wetland Hydr Primary Indica Surface W High Water Saturation Water Ma Sediment Drift Depo Algal Mat Iron Depo Surface S Inundatior Sparsely W 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) sits (B3) or Crust (B4) sits (B5) soil Cracks (B6) n Vis ble on Aerial Vegetated Concavations: Present? ersent?	: one required; lmagery (B7) ve Surface (B) ves N ves N ves N	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 Livin  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soi  Stunted or Stressed Plants (D1) (L)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):	g Roots (C3) gls (C6) RR A) Wetland Hydrold	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-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  IYDROLOG  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 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: Present? eresent? eresent? lary fringe) orded Data (strear	: one required;  Imagery (B7) re Surface (Br) Yes N Yes N Yes N n gauge, mor	check all that apply)  Water-Stained Leaves (B9) (except 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 Soi  Stunted or Stressed Plants (D1) (L)  Other (Explain in Remarks)  Outline Depth (inches):  Depth (inches):  Depth (inches):  Depth (inches):	g Roots (C3) gls (C6) RR A) Wetland Hydrold	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-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  IYDROLOG  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 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: Present? eresent? eresent? lary fringe) orded Data (strear	: one required;  Imagery (B7) re Surface (Br) Yes N Yes N Yes N n gauge, mor	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 Livin  Presence of Reduced Iron (C4)  Recent Iron Reduction in Tilled Soi  Stunted or Stressed Plants (D1) (L)  Other (Explain in Remarks)  Depth (inches):  Depth (inches):	g Roots (C3) gls (C6) RR A) Wetland Hydrold	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-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  IYDROLOG  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 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: Present? eresent? eresent? lary fringe) orded Data (strear	: one required;  Imagery (B7) re Surface (Br) Yes N Yes N Yes N n gauge, mor	check all that apply)  Water-Stained Leaves (B9) (except 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 Soi  Stunted or Stressed Plants (D1) (L)  Other (Explain in Remarks)  Outline Depth (inches):  Depth (inches):  Depth (inches):  Depth (inches):	g Roots (C3) gls (C6) RR A) Wetland Hydrold	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-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 Meadows	City/0	County: Lincoln	County Sampling Date: 2024-07-16
Applicant/Owner: Montana Dept. Of Transportati	-	-	State: Montana Sampling Point: DP08w
Investigator(s): R McEldowney	Secti	on, Township, Ra	nge: S11 T27N R30W
Landform (hillslope, terrace, etc.): Floodplain			
, ,		•	Long: -115.419425 Datum: NAD 83
Soil Map Unit Name: 105 - Aquic Udifluvents, poorl			NWI classification: Not mapped
Are climatic / hydrologic conditions on the site typical for the	nis time of year? \		
Are Vegetation, Soil, or Hydrology			'Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally problem	atic? (If ne	eeded, explain any answers in Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sar	npling point l	ocations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>✓</u>	No		
	No	Is the Sampled within a Wetlar	
Wetland Hydrology Present? Yes	No	within a wetial	iu: les NU
Remarks:			
PEM, riverine wetland data point.			
VEGETATION – Use scientific names of pla	nts.		
Tree Stratum (Plot size: 30 ft r		minant Indicator ecies? Status	Dominance Test worksheet:
1			Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2			Total Number of Dominant
3			Species Across All Strata: 1 (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15 ft r )	= To	otai Cover	That Are OBL, FACW, or FAC: 100.00 (A/B)
1			Prevalence Index worksheet:  Total % Cover of: Multiply by:
2			OBL species 5 x 1 = 5
3			FACW species 80 x 2 = 160
4			FAC species $0 \times 3 = 0$
5			FACU species $0   x 4 = 0$
Herb Stratum (Plot size: 5 ft r	= To	otal Cover	UPL species 0 x 5 = 0
1. Phalaris arundinacea	80	✓ FACW	Column Totals: <u>85</u> (A) <u>165</u> (B)
2. Carex utriculata	5	OBL	Prevalence Index = B/A = 1.94
3			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) <sup>1</sup> Indicators of hydric soil and wetland hydrology must
11			be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size:)	<u>00                                   </u>	tal Cover	
1			Hydrophytic
2			Vegetation
	= To		Present? Yes No No
% Bare Ground in Herb Stratum 15			
	1 1		
Evidence of hydrophytic vegetation inc	ciudes a pos	itive rapid te	est, dominance test, and a prevalence
index less than or equal to 3.0.			

US Army Corps of Engineers

SOIL Sampling Point: DP08w

Profile Desc	ription: (Describe	to the dep	th neede				onfirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color	Redox (moist)	Features %	Type <sup>1</sup> L	oc <sup>2</sup>	Texture	Remarks
0 - 2	10YR 2/2	100	COIOI	(IIIOISI)		<u>rype</u> <u>L</u>	00	Peat	Fibric
	101R 2/2 10YR 2/1	100						Peat	
2 - 15	1018 2/1	100	-					Peat	Sapric
-									
1T C-C-		Jeties DM		d Matrix CC				: 21	anting DI - Days Lining M-Matrix
	oncentration, D=Dep Indicators: (Applic						and Gra		cation: PL=Pore Lining, M=Matrix.  ors for Problematic Hydric Soils <sup>3</sup> :
Histosol		abic to un		dy Redox (S		.u.,			n Muck (A10)
	oipedon (A2)			ped Matrix (	•				Parent Material (TF2)
Black Hi						) (except ML	.RA 1)		y Shallow Dark Surface (TF12)
	n Sulfide (A4)			my Gleyed N		)		Oth	er (Explain in Remarks)
	Below Dark Surfac	e (A11)		leted Matrix	. ,			a	
	ark Surface (A12)			ox Dark Sur		7)			ors of hydrophytic vegetation and
-	lucky Mineral (S1) sleyed Matrix (S4)			leted Dark S ox Depressi	•	7)			nd hydrology must be present, ss disturbed or problematic.
	_ayer (if present):		1.00	ох Воргосог	0110 (1 0)			dilloc	o distance of problematic.
Type:	, , ,								
Depth (inc	ches):							Hydric Soil	Present? Yes No
Remarks:									
Histic ep	ipedon obse	erved.							
HYDROLO	GY								
Wetland Hyd	drology Indicators:								
Primary Indic	ators (minimum of o	ne require	d; check a	all that apply	)			Secor	ndary Indicators (2 or more required)
Surface	Water (A1)			Water-Stair	ned Leave	es (B9) (exce	pt	V	Vater-Stained Leaves (B9) (MLRA 1, 2,
High Wa	iter Table (A2)			MLRA 1	, 2, 4A, a	nd 4B)			4A, and 4B)
✓ Saturation	on (A3)			Salt Crust (	B11)			D	rainage Patterns (B10)
Water M	arks (B1)			Aquatic Inv				D	ry-Season Water Table (C2)
	nt Deposits (B2)			Hydrogen S					aturation Visible on Aerial Imagery (C9)
	oosits (B3)					-	ng Roots		Seomorphic Position (D2)
	it or Crust (B4)			Presence of		. ,			hallow Aquitard (D3)
	osits (B5)					on in Tilled Sc	. ,	· · · · · · · · · · · · · · · · · · ·	AC-Neutral Test (D5)
	Soil Cracks (B6)	Imagan, (D				Plants (D1) ( <b>I</b>	LKK A)		taised Ant Mounds (D6) (LRR A)
	on Vis ble on Aerial  Vegetated Concav			Other (Exp	alli ili Kei	marks)		<u> </u>	rost-Heave Hummocks (D7)
Field Observ		e Suriace (	B0)						
Surface Water		/es	No 🗸	_ Depth (inc	hes).				
Water Table				_ Depth (inc _ Depth (inc		-			
Saturation Pr				_ Depth (inc _ Depth (inc			Wetla	nd Hydrolog	y Present? Yes V No No
(includes cap	oillary fringe)								y Fresent: Tes NO
Describe Red	corded Data (stream	n gauge, m	onitoring v	well, aerial p	hotos, pre	evious inspec	tions), if	available:	
Remarks:									
Located	at toe of slo	pe. Sa	turatio	on obse	rved a	at 2 inch	es be	low aro	und surface.
		,						g. e.	

Project/Site: Schrieber Meadows	C	ity/County:	Lincoln (	County	Sampling Date: 2024-07-16
Applicant/Owner: Montana Dept. of Transportation	1			State: Montana	Sampling Point: DP09u
Investigator(s): E Reynaud					
					Slope (%): 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 Hydrology si	-				present? Yes No
Are Vegetation, Soil, or Hydrology na				eded, explain any answe	
SUMMARY OF FINDINGS – Attach site map s					
Hydrophytic Vegetation Present? Yes No	, <u> </u>				
Hydric Soil Present? Yes No	) <u> </u>		e Sampled n a Wetlan		No 🗸
Wetland Hydrology Present? Yes No		Withii	ii a vvetiaii		
Remarks:					
Data point taken near NE border of si	te.				
VEGETATION – Use scientific names of plant	S.				
Tree Stratum (Plot size: 30 ft r	Absolute % Cover			Dominance Test work	
1				Number of Dominant Sp That Are OBL, FACW, of	
2				Total Number of Domin	ant
3				Species Across All Stra	•
4				Percent of Dominant Sp	pecies
Sapling/Shrub Stratum (Plot size: 15 ft r		= Total Cov	er/	That Are OBL, FACW, o	
1				Prevalence Index work	
2.					Multiply by:
3					x = 0 $x = 0$ $x = 0$
4				FAC species 67	x 2 = 0 x 3 = 201
5					x 4 = 0
Herb Stratum (Plot size: 5 ft r		= Total Cov	er/	0.5	x 5 = 125
1. Alopecurus pratensis	55	~	FAC	Column Totals: 92	(A) <u>326</u> (B)
2. Bromus inermis	25	~	UPL	Prevalence Index	= R/A = 3.54
3. Agrostis capillaris	10		FAC	Hydrophytic Vegetation	
4. Cirsium arvense	2		FAC	1 - Rapid Test for H	Hydrophytic Vegetation
5				2 - Dominance Tes	it is >50%
6				3 - Prevalence Inde	
7					Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)
8 9				5 - Wetland Non-Va	• • • • • • • • • • • • • • • • • • • •
10					phytic Vegetation <sup>1</sup> (Explain)
11.					l and wetland hydrology must
	00	Total Cov	er	be present, unless distu	irbed or problematic.
Woody Vine Stratum (Plot size:)					
1				Hydrophytic Vegetation	
2					s No <u> </u>
% Bare Ground in Herb Stratum 8		· TOTAL COV	CI		
Remarks:					
No evidence of hydrophytic vegetation	on obse	rved.			

SOIL Sampling Point: DP09u

(inches) Color (moist) % Color (mo	Redox Features	Tester
		Texture Remarks
0-3 10YR 5/2 100	<del> </del>	_oam
3 - 14 10YR 2/2 100	<u> </u>	_oam
<del>-</del>		
<u> </u>		
-		
<u> </u>		
		· · · · · · · · · · · · · · · · · · ·
		2.
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Ma Hydric Soil Indicators: (Applicable to all LRRs, unles		ns. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
, , , ,	,	•
<del>_</del> , , ,	Redox (S5) I Matrix (S6)	2 cm Muck (A10) Red Parent Material (TF2)
	Mucky Mineral (F1) (except MLRA 1)	Very Shallow Dark Surface (TF12)
	Gleyed Matrix (F2)	Other (Explain in Remarks)
	d Matrix (F3)	
_ ` '	Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and
	d Dark Surface (F7)	wetland hydrology must be present,
Sandy Gleyed Matrix (S4) Redox E Restrictive Layer (if present):	Depressions (F8)	unless disturbed or problematic.
Type:		
Depth (inches):		Hydric Soil Present? Yes No
Remarks:		Tryunc con resent: res No
IYDROLOGY Wetland Hydrology Indicators:		
	nat annly)	
•		Secondary Indicators (2 or more required)
Surface Water (A1) Wa	ater-Stained Leaves (B9) (except	Water-Stained Leaves (B9) (MLRA 1, 2,
Surface Water (A1) Wa High Water Table (A2)	ater-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
Surface Water (A1) Wa High Water Table (A2) Saturation (A3) Sal	ater-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) It Crust (B11)	<ul><li>Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</li><li>Drainage Patterns (B10)</li></ul>
Surface Water (A1) Wa High Water Table (A2) Saturation (A3) Sal Water Marks (B1) Aqu	hter-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) It Crust (B11) uatic Invertebrates (B13)	<ul> <li>Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> </ul>
Surface Water (A1) Water High Water Table (A2) Saturation (A3) Saliment Deposits (B2) Hydelian	MLRA 1, 2, 4A, and 4B) It Crust (B11) uatic Invertebrates (B13) drogen Sulfide Odor (C1)	<ul> <li>Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Saturation Visible on Aerial Imagery (C9</li> </ul>
High Water Table (A2) Saturation (A3) Sal Water Marks (B1) Aqu Sediment Deposits (B2) Hyu Drift Deposits (B3) Ox	tter-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) It Crust (B11) uatic Invertebrates (B13) drogen Sulfide Odor (C1) idized Rhizospheres along Living Roots	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9 (C3) Geomorphic Position (D2)
Surface Water (A1) Wa High Water Table (A2) Saturation (A3) Sal Water Marks (B1) Aqu Sediment Deposits (B2) Hyu Drift Deposits (B3) Ox Algal Mat or Crust (B4) Pre	Atter-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) It Crust (B11) Luatic Invertebrates (B13) Adrogen Sulfide Odor (C1) Lidized Rhizospheres along Living Roots Lesence of Reduced Iron (C4)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3)
Surface Water (A1) Wa High Water Table (A2) Saturation (A3) Sal Water Marks (B1) Aqi Sediment Deposits (B2) Hyi Drift Deposits (B3) Ox Algal Mat or Crust (B4) Pre Iron Deposits (B5) Re	tter-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) It Crust (B11) uatic Invertebrates (B13) drogen Sulfide Odor (C1) idized Rhizospheres along Living Roots	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2)
Surface Water (A1)       Wa         High Water Table (A2)       Saturation (A3)         Water Marks (B1)       Aq         Sediment Deposits (B2)       Hy         Drift Deposits (B3)       Ox         Algal Mat or Crust (B4)       President President (B5)         Iron Deposits (B5)       Re         Surface Soil Cracks (B6)       Stu	Atter-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) It Crust (B11) Unatic Invertebrates (B13) drogen Sulfide Odor (C1) idized Rhizospheres along Living Roots esence of Reduced Iron (C4) cent Iron Reduction in Tilled Soils (C6)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Surface Water (A1)       Wa         High Water Table (A2)       Saturation (A3)         Water Marks (B1)       Aq         Sediment Deposits (B2)       Hy         Drift Deposits (B3)       Ox         Algal Mat or Crust (B4)       President President (B5)         Iron Deposits (B5)       Re         Surface Soil Cracks (B6)       Stu	MLRA 1, 2, 4A, and 4B) It Crust (B11) uatic Invertebrates (B13) drogen Sulfide Odor (C1) idized Rhizospheres along Living Roots esence of Reduced Iron (C4) cent Iron Reduction in Tilled Soils (C6) inted or Stressed Plants (D1) (LRR A)	<ul> <li>Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>(C3) Geomorphic Position (D2)</li> <li>Shallow Aquitard (D3)</li> <li>FAC-Neutral Test (D5)</li> <li>Raised Ant Mounds (D6) (LRR A)</li> </ul>
Surface Water (A1) Water Table (A2) Saturation (A3) Sal Water Marks (B1) Aqu Sediment Deposits (B2) Hyu Drift Deposits (B3) Ox Algal Mat or Crust (B4) Pre Iron Deposits (B5) Re Surface Soil Cracks (B6) Stu Inundation Vis ble on Aerial Imagery (B7)	MLRA 1, 2, 4A, and 4B) It Crust (B11) uatic Invertebrates (B13) drogen Sulfide Odor (C1) idized Rhizospheres along Living Roots esence of Reduced Iron (C4) cent Iron Reduction in Tilled Soils (C6) inted or Stressed Plants (D1) (LRR A)	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)  Drainage Patterns (B10)  Dry-Season Water Table (C2)  Saturation Visible on Aerial Imagery (C9)  (C3) Geomorphic Position (D2)  Shallow Aquitard (D3)  FAC-Neutral Test (D5)  Raised Ant Mounds (D6) (LRR A)
Surface Water (A1) Water Table (A2) Saturation (A3) Sal Water Marks (B1) Aqu Sediment Deposits (B2) Hyu Drift Deposits (B3) Ox Algal Mat or Crust (B4) Pre Iron Deposits (B5) Re Surface Soil Cracks (B6) Stu Inundation Vis ble on Aerial Imagery (B7) Oth Sparsely Vegetated Concave Surface (B8)  Water Marks (B1) Sal Aqu	MLRA 1, 2, 4A, and 4B) It Crust (B11) uatic Invertebrates (B13) drogen Sulfide Odor (C1) idized Rhizospheres along Living Roots esence of Reduced Iron (C4) cent Iron Reduction in Tilled Soils (C6) inted or Stressed Plants (D1) (LRR A)	<ul> <li>Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>(C3) Geomorphic Position (D2)</li> <li>Shallow Aquitard (D3)</li> <li>FAC-Neutral Test (D5)</li> <li>Raised Ant Mounds (D6) (LRR A)</li> </ul>
Surface Water (A1) Water Table (A2) Saturation (A3) Sal Water Marks (B1) Aqu Sediment Deposits (B2) Hyu Drift Deposits (B3) Ox Algal Mat or Crust (B4) Pre Iron Deposits (B5) Re Surface Soil Cracks (B6) Stu Inundation Vis ble on Aerial Imagery (B7) Oth Sparsely Vegetated Concave Surface (B8)  Field Observations: Surface Water Present? Yes No December 2015	Atter-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) It Crust (B11) Unatic Invertebrates (B13) drogen Sulfide Odor (C1) idized Rhizospheres along Living Roots esence of Reduced Iron (C4) cent Iron Reduction in Tilled Soils (C6) Inted or Stressed Plants (D1) (LRR A) her (Explain in Remarks)	<ul> <li>Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>(C3) Geomorphic Position (D2)</li> <li>Shallow Aquitard (D3)</li> <li>FAC-Neutral Test (D5)</li> <li>Raised Ant Mounds (D6) (LRR A)</li> </ul>
	MLRA 1, 2, 4A, and 4B) It Crust (B11) uatic Invertebrates (B13) drogen Sulfide Odor (C1) idized Rhizospheres along Living Roots esence of Reduced Iron (C4) cent Iron Reduction in Tilled Soils (C6) unted or Stressed Plants (D1) (LRR A) her (Explain in Remarks)	<ul> <li>Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>(C3) Geomorphic Position (D2)</li> <li>Shallow Aquitard (D3)</li> <li>FAC-Neutral Test (D5)</li> <li>Raised Ant Mounds (D6) (LRR A)</li> </ul>
Surface Water (A1) Water Table (A2)  High Water Table (A2)  Saturation (A3) Sal  Water Marks (B1) Aqu  Sediment Deposits (B2) Hyu  Drift Deposits (B3) Ox  Algal Mat or Crust (B4) Pre  Iron Deposits (B5) Re  Surface Soil Cracks (B6) Stu  Inundation Vis ble on Aerial Imagery (B7) Oth  Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present? Yes No Descriptions  Saturation Present? Yes No Descriptions  Saturation Present? Yes No Descriptions  Gincludes capillary fringe)	MLRA 1, 2, 4A, and 4B) It Crust (B11) uatic Invertebrates (B13) drogen Sulfide Odor (C1) idized Rhizospheres along Living Roots esence of Reduced Iron (C4) cent Iron Reduction in Tilled Soils (C6) unted or Stressed Plants (D1) (LRR A) her (Explain in Remarks)  epth (inches): epth (inches): epth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2,
	MLRA 1, 2, 4A, and 4B) It Crust (B11) uatic Invertebrates (B13) drogen Sulfide Odor (C1) idized Rhizospheres along Living Roots esence of Reduced Iron (C4) cent Iron Reduction in Tilled Soils (C6) unted or Stressed Plants (D1) (LRR A) her (Explain in Remarks)  epth (inches): epth (inches): epth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2,
Surface Water (A1)	MLRA 1, 2, 4A, and 4B) It Crust (B11) uatic Invertebrates (B13) drogen Sulfide Odor (C1) idized Rhizospheres along Living Roots esence of Reduced Iron (C4) cent Iron Reduction in Tilled Soils (C6) unted or Stressed Plants (D1) (LRR A) her (Explain in Remarks)  epth (inches): epth (inches): epth (inches):	Water-Stained Leaves (B9) (MLRA 1, 2,
Surface Water (A1)	Atter-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) It Crust (B11) Unatic Invertebrates (B13) Idrogen Sulfide Odor (C1) Idized Rhizospheres along Living Roots Idrogen Seence of Reduced Iron (C4) Idrogent Iron Reduction in Tilled Soils (C6) Inted or Stressed Plants (D1) (LRR A) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction Iron Iron Reduction Iron Iron Reduction Iron Iron Reduction Iron Iron Iron Iron Iron Iron Iron Ir	Water-Stained Leaves (B9) (MLRA 1, 2,
Surface Water (A1)	Atter-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) It Crust (B11) Unatic Invertebrates (B13) Idrogen Sulfide Odor (C1) Idized Rhizospheres along Living Roots Idrogen Seence of Reduced Iron (C4) Idrogent Iron Reduction in Tilled Soils (C6) Inted or Stressed Plants (D1) (LRR A) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction Iron Iron Reduction Iron Iron Reduction Iron Iron Reduction Iron Iron Iron Iron Iron Iron Iron Ir	Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) Drainage Patterns (B10) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) (C3) Geomorphic Position (D2) Shallow Aquitard (D3) FAC-Neutral Test (D5) Raised Ant Mounds (D6) (LRR A) Frost-Heave Hummocks (D7)
Surface Water (A1) Water Table (A2) Saturation (A3) Sal Water Marks (B1) Aqu Sediment Deposits (B2) Hyu Drift Deposits (B3) Ox Algal Mat or Crust (B4) Pre Iron Deposits (B5) Re Surface Soil Cracks (B6) Stu Inundation Vis ble on Aerial Imagery (B7) Oth Sparsely Vegetated Concave Surface (B8)  Field Observations:  Surface Water Present? Yes No Water Table Present? Yes No Includes capillary fringe)	Atter-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B) It Crust (B11) Unatic Invertebrates (B13) Idrogen Sulfide Odor (C1) Idized Rhizospheres along Living Roots Idrogen Seence of Reduced Iron (C4) Idrogent Iron Reduction in Tilled Soils (C6) Inted or Stressed Plants (D1) (LRR A) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction in Tilled Soils (C6) Inter (Explain in Remarks) Idrogent Iron Reduction Iron Iron Reduction Iron Iron Reduction Iron Iron Reduction Iron Iron Iron Iron Iron Iron Iron Ir	Water-Stained Leaves (B9) (MLRA 1, 2,

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

Applicant/Owner   Montana Dept. Of Transportation   State   Montana   Sampling Point   DP09w   Investigator(s): R McEldowney   Section, Township, Range: ST1 T27N R30W   State   Sta	Project/Site: Schrieber Meadows	C	City/Count	ty: Lincoln (	County S	Sampling Date: 2024-07-16
	•		-	-		·
Landform (hillslope, terroce, etc.): Floodplain  Lat: 48.114377  Long: T15.419712  Datum: NAD 83  Subregion (LRR): £430.  Name Lat: 48.114377  Long: T15.419712  Datum: NAD 83  Subregion (LRR): £430.  Name: 105 - Aquic Udifluvents, poorly drained  Are climatic / hydrology conditions on the site lypical for this time of year? Yes No	••					
Subvegion (LRR): E 43A Soil Map Jun Name: 105 - Aquic Udiffuvents, poorty drained  Are Vegetation Soil or Hydrology significantly disturbed?  Are Vegetation Soil or Hydrology naturally problematic?  Are Vegetation Posent?  Yes V No Wetland Hydrology Present?  Yes V No Wetland?  Yes V No Wetland?  Yes V No Wetland Basin.  VEGETATION – Use scientific names of plants.  Tree Stratum (Plot size: 30 ft r ) Alsoulte Dominant Indicator Species That Are OBL, FACW, or FAC 2 (A)  Total Number of Dominant Species That Are OBL, FACW, or FAC 2 (B)  Total Wetland Hydrology Present of Dominant Species That Are OBL, FACW, or FAC 2 (B)  SapilinosShrub Stratum (Plot size: 15 ft r ) Allows incana  3 FACW Prevalence Index worksheet:  Total Wetland Hydrology				Slope (%): 5		
Soil Map Unit Name: 105 - Aquic Udiffluvents, poorly drained   Not classification: Not mapped   Are climator / hydrologic conditions on the site typical for this time of year? Yes   No						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No ((if no. explain in Remarks.)  Are Vegetation Soil or Hydrology significantly disturbed?						
Are Vegetation Soil or Hydrology significantly disturbed? Are 'Normal Circumstances' present? Yes No Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes No Wetland Hydrology Present? Yes No No Wetland Hydrology Present? Yes No No Wetland Hydrology Present? Yes No						
Are Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)  SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Ves No Ves No						
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc.  Hydrophytic Vegetation Present? Yes V No Is the Sampled Area within a Wetland Pydrology Present? Yes V No Wetland Hydrology Present?  Wetland Hydrology Present? Yes V No						
Is the Sampled Area within a Wetland?   Ves _ v   No _ within a Wetland a Wetland a Ves _ v   No _ within a Wetland?						
Wetland Hydroflogy Present?   Yes   V No     within a Wetland?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No       Wetland Hydroflogy Present?   Yes   V No       Wetland Hydroflogy Present?   Yes   V No       Wetland Hydroflogy Present?   Yes   V No       Wetland Hydroflogy Present?   Yes   V No       Wetland Hydroflogy Present?   Yes   V No       Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Hydroflogy Present?   Yes   V No     Wetland Hydroflogy Hydroflogy Present?   Yes   V No     Wetland Nor   Wetland Nor   Yes   V No     Wetland Nor   Wetland Nor   Yes   V No     Wetland Nor   Wetland Nor   Yes   V No     Wetland Nor   Wetland Hydroflogy must be present. unless disturbed or problematic.   Yes   V No     Wetland Nor   Wetland Nor   Yes   V No     Wetland Nor   Wetland Nor   Yes   V No     Wetland Nor   Yes   V No	Hydrophytic Vegetation Present? Yes N	0				
Personation   Provided   Provid	_			-		No
PEM. Data point is located on the edge of a constructed wetland basin.  VEGETATION – Use scientific names of plants.  Tree Stratum (Plot size: 30 ft r		o	WIL	iiiii a vvetiai	iu! Tes	NO
VEGETATION – Use scientific names of plants.           Tree Stratum         (Plot size: 30 ft r % Cover						
Absolute   Species   Status   Mominant   Indicator   Species   Status   Status   Number of Dominant Species   Number of Dominant	PEM. Data point is located on the ed	ge of a	constr	ructed w	etland basin.	
Tree Stratum (Plot size: 30 ftr	VEGETATION – Use scientific names of plan	ts.				
1.	Tree Stratum (Plot size: 30 ft r					
2						cies FAC: 2 (A)
3						
A						
Sapling/Shrub Stratum					Percent of Dominant Spec	cies
1. Alnus incana   3	Capling/Chrub Stratum (Diet size: 15 ft r		= Total C	over	That Are OBL, FACW, or	FAC: 100.00 (A/B)
Salix lutea		3		FACW	Prevalence Index works	heet:
Section   Sect						
4.	-	· ——				
FAC Species   Substitution   Stratum   Color   FAC   FAC   Species   Substitution   Stratum   Color   FAC   FAC   Species   Substitution   Stratum   Color   FAC   FAC   Species   Substitution   Stratum   Color   FAC   FAC   Species   Substitution   Stratum   Color   FAC   FAC   Species   Substitution   Stratum   Color   FAC   FAC   Species   Substitution   Stratum   Color   FAC   FAC   Species   Substitution   Stratum   Color   FAC   FAC   Species   Substitution   Stratum   Color   FAC   FAC   Species   Substitution   Stratum   Color   FAC   FAC   Species   Substitution   Stratum   Color   Stratum   Color   FAC   FAC   Species   Substitution   Stratum   Color   Stratum   Color   FAC   FAC   Species   Substitution   Stratum   Color   Stratum   Color   FAC						
Herb Stratum (Plot size: 5 ft r						
Herb Stratum (Plot size: 5 ft r			= Total C	over		<del></del>
2. Agrostis capillaris 3. Equisetum arvense 4. Phalaris arundinacea 5. Alopecurus pratensis 6. Cirsium arvense 8. Scirpus microcarpus 9. Fragaria virginiana 10. FACU 10. FAC 10. FAC 20. Dominance Test is >50% 20. Bare Ground in Herb Stratum 20. Remarks:  Evidence of hydrophytic vegetation includes a positive dominance test and a prevalence index = B/A = 2.20  Prevalence Index = B/A = 2.20  Hydrophytic Vegetation Indicators:  1 - Rapid Test for Hydrophytic Vegetation  FAC 2 - Dominance Test is >50% 2 - Dominance Test is vession in Hydrophytic Vegetation in Hydrophytic Vegetation in Hydrophytic Vegetation in Hydrophytic Vegetation in H						
3. Equisetum arvense 4. Phalaris arundinacea 5. Alopecurus pratensis 6. Cirsium arvense 7. Trifolium campestre 8. Scirpus microcarpus 9. Fragaria virginiana 10. FACU 10. FACW 20. Dominance Test is >50% 21. Alopecurus pratensis 22. OBL 33. Prevalence Index is ≤3.0¹ 44. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 25. Wetland Non-Vascular Plants¹ 26. FACU 27. Trifolium campestre 38. Scirpus microcarpus 40. FACU 40. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 40. FACU 40. FACU 40. FOR District Index = 15.14 Exclaration Indicators: 41. FACU 41. FACU 42. Dominance Test is >50% 43. Prevalence Index is ≤3.0¹ 44. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 45. FACU 46. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 47. FACU 47. FACU 48. FACU 49. FACU 40. FACU 41. FACU					Column Totals: 78	(A) <u>1/2</u> (B)
4. Phalaris arundinacea 5. Alopecurus pratensis 6. Cirsium arvense 7. Trifolium campestre 8. Scirpus microcarpus 9. Fragaria virginiana 10. FACU 10. Problematic Hydrophytic Vegetation 10. Problematic Hydrophytic Vegetation 10. Problematic Hydrophytic Vegetation 11. Problematic Hydrophytic Vegetation 12. Problematic Hydrophytic Vegetation 13. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  Woody Vine Stratum (Plot size:) 1. Problematic Hydrophytic Vegetation   Yes No  Hydrophytic Vegetation   Yes No  Bare Ground in Herb Stratum 26  Evidence of hydrophytic vegetation includes a positive dominance test and a prevalence index less		- —			Prevalence Index =	B/A = 2.20
5. Alopecurus pratensis 6. Cirsium arvense 7. Trifolium campestre 8. Scirpus microcarpus 9. Fragaria virginiana 10		- —				
6. Cirsium arvense 7. Trifolium campestre 8. Scirpus microcarpus 9. Fragaria virginiana 1	Alamanumus mustamais	. ——			· · · · · · · · · · · · · · · · · · ·	
7. Trifolium campestre 8. Scirpus microcarpus 9. Fragaria virginiana 1. FACU 10	*'	· ——				
8. Scirpus microcarpus 9. Fragaria virginiana 1 FACU 10						
9. Fragaria virginiana 1						
10 Problematic Hydrophytic Vegetation¹ (Explain)  11 74 = Total Cover  Woody Vine Stratum (Plot size:)  1 Total Cover  Wegetation Present, unless disturbed or problematic.  Hydrophytic Vegetation Present? Yes No  Remarks:  Evidence of hydrophytic vegetation includes a positive dominance test and a prevalence index less						• .
11	<u> </u>					
Moody Vine Stratum (Plot size:)   Total Cover   Depresent, unless disturbed or problematic.   Hydrophytic Vegetation   Present?   No   No      Remarks:   Evidence of hydrophytic vegetation includes a positive dominance test and a prevalence index less					<sup>1</sup> Indicators of hydric soil a	and wetland hydrology must
1		74	= Total Co	over	be present, unless disturb	ed or problematic.
2 = Total Cover Vegetation Present? Yes No  **Remarks:  Evidence of hydrophytic vegetation includes a positive dominance test and a prevalence index less	, , , , , , , , , , , , , , , , , , , ,					
% Bare Ground in Herb Stratum 26  Remarks:  Evidence of hydrophytic vegetation includes a positive dominance test and a prevalence index less						
% Bare Ground in Herb Stratum 26  Remarks:  Evidence of hydrophytic vegetation includes a positive dominance test and a prevalence index less	2				vegetation Present? Yes	✓ No
Remarks:  Evidence of hydrophytic vegetation includes a positive dominance test and a prevalence index less	% Bare Ground in Herb Stratum 26		= Total Co	over		<u> </u>
					I	
	Evidence of hydrophytic vegetation incl	udes a n	ositive	e domina	nce test and a prev	valence index less
	than or equal to 3.0.	<b> -</b>				

SOIL Sampling Point: DP09w

Profile Desc	ription: (Describe	to the de				or confirm	the absence	of indicators.)		
Depth	Matrix	%		Redox Feature	es Type <sup>1</sup>	Loc²	Tauduma	Demode		
(inches) 0 - 2	Color (moist) 10YR 3/2	100	Color (mois	<u>t)</u> <u>%</u>	<u>rype</u>	LOC	Texture Silty Clay Loam	Remarks		
			10VD F/C							
2 - 16	10YR 6/2	98	10YR 5/6	2	<u>C</u>	<u> </u>	Silt Loam			
-					_					
-										
_										
		·		<del></del>						
	-									
<u>-</u>										
	ncentration, D=Dep ndicators: (Applic					ed Sand Gra		ation: PL=Pore Lining, M=Matrix.  rs for Problematic Hydric Soils <sup>3</sup> :		
Histosol		abie to ai	Sandy Re		ieu.)			Muck (A10)		
	oipedon (A2)		Stripped N					Parent Material (TF2)		
Black His				icky Mineral (F	1) (excep	ot MLRA 1)		Shallow Dark Surface (TF12)		
Hydroge	n Sulfide (A4)			eyed Matrix (F.		,		r (Explain in Remarks)		
	l Below Dark Surfac	e (A11)	✓ Depleted I	, ,						
	rk Surface (A12)			rk Surface (F6				rs of hydrophytic vegetation and		
-	lucky Mineral (S1)			Dark Surface ( pressions (F8)				nd hydrology must be present, s disturbed or problematic.		
	leyed Matrix (S4)  Layer (if present):		Redux De	pressions (Fo)	1		Turiless	s disturbed or problematic.		
Type:	ayo. ( p. ooo).									
Depth (inc							Hydric Soil	Present? Yes No		
Remarks:			<del></del>				,	<u></u>		
Soil is mo	oist with a de	eplete	d matrix.							
HYDROLO										
-	drology Indicators:									
-	ators (minimum of o	ne require						dary Indicators (2 or more required)		
	Water (A1)			r-Stained Leav		except	W	ater-Stained Leaves (B9) (MLRA 1, 2,		
_	ter Table (A2)			LRA 1, 2, 4A,	and 4B)		_	4A, and 4B)		
Saturatio	, ,			Crust (B11)	(D40)		Drainage Patterns (B10)			
	arks (B1) it Deposits (B2)			itic Invertebrat ogen Sulfide C				ry-Season Water Table (C2) aturation Visible on Aerial Imagery (C9)		
	oosits (B3)		-	-		a Living Root		eomorphic Position (D2)		
	t or Crust (B4)			ence of Reduc		-		nallow Aquitard (D3)		
_	osits (B5)			nt Iron Reduct				AC-Neutral Test (D5)		
-	Soil Cracks (B6)			ed or Stressed				aised Ant Mounds (D6) (LRR A)		
	on Vis ble on Aerial I	magery (E		r (Explain in R		, , ,		ost-Heave Hummocks (D7)		
Sparsely	Vegetated Concave	e Surface	(B8)							
Field Observ	vations:									
Surface Water	er Present? Y	es	No V Dep	th (inches):						
Water Table	Present? Y	es	No V Dep	th (inches):						
Saturation Pr	Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No							Present? Yes No		
(includes capillary fringe)  Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:										
Describe Necoraeu Data (stream gauge, monitoring well, aenai priotos, previous inspections), il available.										
Pemarke:										
Remarks:										
Two secondary wetland hydrology indicators are present.										

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

Project/Site: Schrieber Meadows	City/County: Lincoln County Sampling Date: 2024-07-16						
Applicant/Owner: Montana Dept. Of Transportation		State: Montana Sampling Point: DP10u					
Investigator(s): R McEldowney		Section, Township, Range: S11 T27N R30W					
Landform (hillslope, terrace, etc.): Floodplain	Local relie	cal relief (concave, convex, none): Linear Slope (%): 1					
Subregion (LRR): E 43A	Lat: 48.	115547		Long: -115.418438	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 year	ar? Yes	No_	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrology si	gnificantly o	disturbed?	Are "	Normal Circumstances" p	present? Yes No		
Are Vegetation, Soil, or Hydrology na	aturally prob	olematic?	(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	C.	
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wetland Hydrology Present?  Remarks:  Upland data point at north end of the			ne Sampled nin a Wetlar		No <u> </u>		
VEGETATION – Use scientific names of plant	s.						
20.65	Absolute % Cover		t Indicator Status	Dominance Test work			
1				That Are OBL, FACW,			
2				Total Number of Domin			
3				Species Across All Stra	ta: <u>1</u> (B)		
4		= Total Co		Percent of Dominant Sp		`	
Sapling/Shrub Stratum (Plot size: 15 ft r		Total Ot	JVC1	That Are OBL, FACW,  Prevalence Index wor	(.12)	_	
1				Total % Cover of:			
2				9	x 1 = 0		
3				FACW species 0			
4   5.			. ——	FAC species 77	x 3 = <u>231</u>		
		= Total Co	over		x 4 = <u>0</u>		
Herb Stratum (Plot size: 5 ft r )		- Total Ot	JVCI		x 5 = <u>50</u>		
1. Alopecurus pratensis	75		FAC	Column Totals: 87	(A) <u>281</u> (B)		
2. Bromus inermis	10	_	UPL	Prevalence Index	· · · · · · · · · · · · · · · · · · ·		
3. Cirsium arvense	2		FAC	Hydrophytic Vegetation	on Indicators:		
4				1 - Rapid Test for I			
5				<u>✓</u> 2 - Dominance Tes			
6				3 - Prevalence Inde			
7 8					Adaptations <sup>1</sup> (Provide supportings s or on a separate sheet)	g	
9.				5 - Wetland Non-Va	ascular Plants <sup>1</sup>		
10				Problematic Hydro	phytic Vegetation <sup>1</sup> (Explain)		
11					l and wetland hydrology must		
Woody Vine Stratum (District)	87	= Total Co	ver	be present, unless distu	льец ог рговієтаціс.	4	
Woody Vine Stratum (Plot size:)							
1 2				Hydrophytic Vegetation			
				Present? Ye	s No		
% Bare Ground in Herb Stratum 13	-	. 5.2.1 00					
Remarks:	ow fort	ail (Ala	nacurus	protoncia\ a EAC	choolog and naces		

Data point dominated by creeping meadow foxtail (Alopecurus pratensis), a FAC species, and passes the dominance test. Upland status was determined by soils and hydrology.

SOIL Sampling Point: DP10u

Profile Desc	ription: (Describ	e to the dep	th neede				confirm	the absence	of indicato	rs.)	
Depth (inches)	Matrix Color (moist)	%	Color	Redox (moist)	Features %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0 - 18	10YR 2/2	100		(IIIOIOL)	/0	Type _		Silt Loam		INCILIAINS	
<u> </u>	1011(2/2	_ 100					<del></del> -	One Louin	-		
_											
¹Type: C=Co	oncentration, D=De	epletion, RM	=Reduced	d Matrix, CS	=Covered	or Coated	Sand Gra	ains. <sup>2</sup> Loc	cation: PL=I	Pore Lining, M	∕I=Matrix.
	ndicators: (Appl									lematic Hydr	
Histosol	(A1)		San	dy Redox (S	5)			2 cr	n Muck (A10	))	
Histic Ep	pipedon (A2)			ped Matrix	. ,				Parent Mat		
Black Hi	` '					) (except M	ILRA 1)			ark Surface (T	F12)
	n Sulfide (A4)	(4.44)		my Gleyed N		)		Oth	er (Explain i	n Remarks)	
	d Below Dark Surfa ark Surface (A12)	ace (A11)		leted Matrix	. ,			3Indicate	ro of budron	hytic vegetati	ion and
	ark Surface (AT2) lucky Mineral (S1)			ox Dark Sur leted Dark S	, ,	7)			, ,	y must be pre	
	lleyed Matrix (S4)			ox Depressi		' )				or problemation	
	_ayer (if present):				()						
Type:	,										
Depth (inc	ches):							Hydric Soil	Present?	Yes	No
Remarks:	·						I				<u> </u>
	c soil indica	itors ob	serve	J.							
HYDROLO	GY										
•	drology Indicator										
	cators (minimum of	f one require	d; check a						-	tors (2 or mor	
<del></del>	Water (A1)					es (B9) ( <b>exc</b>	ept	v			) (MLRA 1, 2,
_	iter Table (A2)				, 2, 4A, a	nd 4B)		_	4A, and 4	•	
Saturation	, ,			Salt Crust	,	(5.40)			rainage Pat		20)
	arks (B1)			Aquatic Inv					-	Water Table (0	
	nt Deposits (B2)			Hydrogen S			D t				I Imagery (C9)
	posits (B3)					_	ing Roots	s (C3) G			
	it or Crust (B4)			Presence of			)-: - (OC)		hallow Aqui		
	osits (B5)					on in Tilled S			AC-Neutral		DD A)
	Soil Cracks (B6) on Vis ble on Aeria	l Imaganı (P				Plants (D1)	(LKK A)			lounds (D6) ( <b>L</b>	
· · · · · · · · · · · · · · · · · · ·	Vegetated Conca		. —	Other (Exp	iaiii iii iNei	iliaiks)		!	105t-1 leave	Hummocks (D	,,,
Field Observ		ive Surface (	D0)				1				
Surface Water		Yes	No 🗸	Denth (inc	hoe).						
	Nater Table Present?       Yes No Depth (inches):         Saturation Present?       Yes No Depth (inches):    Wet				Wotla	nd Hydrolog	v Procent?	Voc	No 🗸		
(includes capillary fringe)											
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:											
Remarks:											
No evide	ence of wet	land hyd	drolog	y obser	ved.						

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

Project/Site: Schrieber Meadows	(	City/County	Lincoln	County	Sampling Date: 2024-07-16			
Applicant/Owner: Montana Dept. of Transportation	ion			State: Montana	Sampling Point: DP10w			
Investigator(s): E Reynaud	naud Section, Township, Ra				ange: S11 T27N R30W			
Landform (hillslope, terrace, etc.): Floodplain								
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 Hydrology sig	-				present? Yes No			
Are Vegetation, Soil, or Hydrology na	aturally prob	olematic?	(If ne	eded, explain any answe	rs in Remarks.)			
SUMMARY OF FINDINGS - Attach site map s	howing	samplin	g point le	ocations, transects	, important features, etc.			
Hydrophytic Vegetation Present?  Hydric Soil Present?  Wes			e Sampled in a Wetlar		No			
Data point taken near NE border of si	te.							
VEGETATION – Use scientific names of plant	S.							
	% Cover	Dominant Species?	Status	Dominance Test work  Number of Dominant S  That Are OBL, FACW, o	pecies			
2				Total Number of Domin	ant			
3				Species Across All Stra	ta: <u>2</u> (B)			
4		= Total Co	ver	Percent of Dominant Sp That Are OBL, FACW, of				
1				Prevalence Index wor	ksheet:			
2.				Total % Cover of:				
3.					x 1 = 60			
4.				FACW species 20	x 2 = 40			
5.				FAC species 10	x 3 = 30			
		= Total Co	ver		x 4 = 0			
Herb Stratum (Plot size: 5 ft r )					x = 0			
1. Carex pellita	60		OBL	Column Totals: 90	(A) <u>130</u> (B)			
Phalaris arundinacea	10		FACW	Prevalence Index				
3. Cirsium arvense	<del></del>		FAC	Hydrophytic Vegetation				
4				✓ 1 - Rapid Test for F	• • •			
5				✓ 2 - Dominance Tes				
6				✓ 3 - Prevalence Inde				
7					Adaptations <sup>1</sup> (Provide supporting s or on a separate sheet)			
8				5 - Wetland Non-Va	• • • • • • • • • • • • • • • • • • • •			
9					phytic Vegetation <sup>1</sup> (Explain)			
10 11					I and wetland hydrology must			
· · ·	90	= Total Cov	/er	be present, unless distu				
Woody Vine Stratum (Plot size:)	-	rotal oov						
1				Hydrophytic				
2				Vegetation	s No			
		= Total Cov		Present? Yes	S NU			
% Bare Ground in Herb Stratum 10 Remarks:								
Evidence of hydrophytic vegetation incluprevalence index less than or equal to 3.	•	ositive	rapid te	est, a positive don	ninance test, and a			

US Army Corps of Engineers

SOIL Sampling Point: DP10w

Profile Desc	ription: (Describ	e to the dep	oth needed to docu	ment the	indicator	or confirm	the absence	e of indicators.)
Depth	Matrix		Redo	x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	<u>Texture</u>	Remarks
0-6	7.5YR 3/1	100					Silty Clay Loan	1
6 - 16	10YR 4/1	95	10YR 4/6	5	С	М	Silty Clay Loan	Organic matter.
-					· '			
·			-	<del>-</del>				
				<u> </u>				
					<u> </u>			
-								
<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.								
			LRRs, unless othe					tors for Problematic Hydric Soils <sup>3</sup> :
Histosol	(A1)		Sandy Redox (	S5)			2	cm Muck (A10)
	oipedon (A2)		Stripped Matrix				·	ed Parent Material (TF2)
Black Hi			Loamy Mucky I		1) (excen	t MI RA 1)		ery Shallow Dark Surface (TF12)
	en Sulfide (A4)		Loamy Gleyed			t IIILITA I)		ther (Explain in Remarks)
	d Below Dark Surf	200 (411)	✓ Depleted Matrix	,	-)		0	iner (Explain in Nemarks)
		ace (ATT)					31	Anna of burden who die van waterliere and
	ark Surface (A12)		Redox Dark Su	` '				tors of hydrophytic vegetation and
-	lucky Mineral (S1)		Depleted Dark	•	-7)			land hydrology must be present,
	Gleyed Matrix (S4)		Redox Depress	sions (F8)			unle	ess disturbed or problematic.
Restrictive I	Layer (if present)							
Type:								,
Depth (inc	ches):						Hydric Sc	oil Present? Yes No
Remarks:								
_				٠.				•1
Presence	е от а феріє	eted mai	rix within the	e profil	ie inai	cates n	yarıc sc	OIIS.
HYDROLO	GY							
	drology Indicator	g.						
-			d; check all that app	lv)			Sec	ondary Indicators (2 or more required)
	•	r one require		•	roo (DO) (4			· · · · · · · · · · · · · · · · · · ·
	Water (A1)		Water-Sta			except		Water-Stained Leaves (B9) (MLRA 1, 2,
	iter Table (A2)			1, 2, 4A,	and 4B)			4A, and 4B)
Saturation	on (A3)		Salt Crust	(B11)				Drainage Patterns (B10)
Water M	larks (B1)		Aquatic In	vertebrate	es (B13)			Dry-Season Water Table (C2)
	nt Deposits (B2)		Hydrogen	Sulfide O	dor (C1)			Saturation Visible on Aerial Imagery (C9)
	posits (B3)		Oxidized I			Living Roo		Geomorphic Position (D2)
					_	-		
	at or Crust (B4)		Presence					Shallow Aquitard (D3)
-	oosits (B5)		Recent Iro					FAC-Neutral Test (D5)
Surface	Soil Cracks (B6)		Stunted o	r Stressec	l Plants (E	01) ( <b>LRR A</b> )		Raised Ant Mounds (D6) (LRR A)
	on Vis ble on Aeria			plain in Re	emarks)		_	Frost-Heave Hummocks (D7)
Sparsely	Vegetated Conca	ave Surface (	(B8)					
Field Obser	vations:							
Surface Water	er Present?	Yes	No Depth (in	ches):				
Water Table	Present?		No Depth (in					
Saturation P	resent?		No Pepth (in				and Hydrolo	gy Present? Yes No
(includes capillary fringe)								
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:								
Remarks:								
Evidence of wetland hydrology includes geomorphic position and a positive FAC-Neutral								
test.								

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

8. Wetland size:

9. Assessment area (AA):

**1. Project Name:** Schrieber Meadows **2. MDT Project #**: NH 27 (021) **Control #**: 1027001

3. Evaluation Date: 10/30/2024 4. Evaluator(s): R. McEldowney 5. Wetlands/Site #(s): Creation

**6. Wetland Location(s): i. Legal:** T27N,R30W,11,12,13 **Latitude/Longitude:** 48.112259, -115.416325 : Center of AA

ii. Approx. Stationing or Mileposts:

iii. Watershed: 1

Watershed Name, County: Kootenai, Lincoln

7. a. Evaluating Agency: CCI for MDT

b. Purpose of Evaluation:

1. Wetlands potentially affected by MDT project

2. Mitigation wetlands; pre-construction

3. X Mitigation wetlands; post-construction

**4.** Other:

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

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
D	AB	E	PP	10
D	EM	E	PP	35
S	EM	NA	SI	20
S	EM	NA	PP	35

Abbreviations: (see manual for definitions)

HGM Classes: Riverine (R), Depressional (D), Slope (S), Mineral Soil Flats (MSF), Organic Soil Flats (OSF), Lacustrine Fringe (LF); Cowardin Classes: Rock Bottom (RB), Unconsolidated bottom (UB), Aquatic Bed (AB), Unconsolidated Shore (US), Moss-lichen Wetland (ML), Emergent Wetland (EM), Scrub-Shrub Wetland (SS), Forested Wetland (FO)

22.960 acres (measured)

22.960 acres (measured)

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

(i b), i aimea (i ), i aimeiai (A)

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

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

#### 12. General condition of AA:

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

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

**Comments:** (types of disturbance, intensity, season, etc.): Highway 2 and USFS roads are adjacent to the AA, land is not cultivated, and low disturbance. Ox-eye daisy continues to increase in cover in the NW portion of the site, continuing a trend observed since 2022.

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Cirsium arvense, Leucanthemum vulgare, Hieracium aurantiacum iii. Provide brief descriptive summary of AA and surrounding land use/habitat: AA includes constructed wetland depressions and adjacent wetland habitat that has been created by the plugging of existing ditches and channels, creation of a new stream channel and historic subsidence of the histosol soil elevations. The surrounding land is currently managed in a natural state. USFS land surrounds the majority of the site.

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

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

Comments: Emergent and aquatic bed classes are present.

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

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

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

Primary or critical habitat (list species)

Secondary habitat (list species)

Incidental hab

Grizzly Bear(D)

Incidental habitat (list species)

Canada Lynx(S)

North American Wolverine(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 database, MTNHP, MDT observations and reports from FWP, USFWS, and FS on use.

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

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

Primary or critical habitat (list species)

Secondary habitat (list species)

Incidental habitat (list species)

Townsend's big-eared bat (S3)(D) - S2S3

- S2S3 Fisher(D) - S2S3

Western toad (S2)(D) - S2S3

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): MTNHP. Western toad has been documented breeding on site by MDT and USFS personnel.

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

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

Substantial (based on any of the following [check]):	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 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 common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, adequate adjacent upland food sources interviews with local biologists with knowledge of the AA	• • •

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

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

				<u> </u>
Fuldance of wildlife use (i)		Wildlife habitat f	eatures rating (ii)	
Evidence of wildlife use (i)	Exceptional	High	Moderate	Moderate
Substantial	1E	.9H	.8H	.7M
Moderate	.9H	.7M	.5M	.3L
Minimal	.6M	.4M	.2L	.1L

Comments: Observed waterfowl, wildlife, and wildlife tracks/scat during the 2024 site visit.

**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		Perr	manent	/ Perei	nnial			Sea	sonal /	Intermi	ttent		Temporary / Ephemeral						
Aquatic hiding / resting / escape cover	Opt	imal	Adec	quate	Poor		Optimal		Adequate		Poor		Optimal		Adequate		Poor		
Thermal cover optimal / suboptimal	0	S	0	S	0	S	0	S	0	S	0	S	0	S	0	S	0	S	
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L	
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L	
FWP Tier III or Introduced Game fish	.8H	.7M	.6M	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L	
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L	

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

- 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: 0.6M Comments: Introduced game and non-game fish species have been observed in previous years.
- **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 tream 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.

35 /	5 =	7	NAME OF THE OWNER OWNER OF THE OWNER OWNE
Flood-prone width	Bankfull width	Entrenchment ratio (ER)	2 x Bankfull Derth

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: Highway adjacent to the site, minimal trees or shrubs present.

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

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

Comments: Extensive areas of perennial inundation greater than 2 feet deep were observed in 2024.

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

NA and proceed to 14H.)

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

Sediment, nutrient, and toxicant input levels within AA	potential to or compour are no sedimentat	deliver levels nds at levels ot substantia ion, sources	ounding land s of sediment such that oth illy impaired. of nutrients of phication pres	er functions Minor or toxicants,	developmen nutrients, or t use with po nutrients, o substantially	t for "probable of toxicants or AA otential to delive r compounds so impaired. Majo	waterbodies in recauses" related receives or sure high levels of uch that other for sedimentations of eutrophica	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 dominated by >70% reed canarygrass, presence of flooding/ponding, unrestricted outlet flows into Schrieber Lake.

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

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

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

Comments: Perennial hydrologic regime in estimated 80% of the AA. Species with high stability ratings are established on the perimeters of excavated areas

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

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

Ī	General Fish Habitat	General V	Vildlife Habitat Rating	g (14C.iii.)
-	Rating (14D.iii.)	E/H	М	L
Ī	E/H	Н	Н	M
Ī	M	Н	M	M
Ī	L	M	M	L
Ī	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 (14I.i.); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to duration of surface water in the AA, where P/P, S/I, and T/E are as previously defined, and A = "absent" [see instructions for further definitions of these terms].)

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

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

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

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

iv. Final Score and Rating: 1.00H

Comments: High level of biological activity, veg component > 5 ac, perennial, has surface and

subsurface outlets.

14J. Groundwater Discharge/Recha	rge: (check	the appropria	te indicators	in i & ii belo	w)				
i. Discharge Indicators				i	i. Recharge	Indicators			
The AA is a slope wetland					Permeable su		ent without u	nderlying imp	eding layer
X Springs or seeps are known	or observed				Vetland conta	•		, , ,	0 ,
Vegetation growing during do		on/drought		;	Stream is a kr	own 'losing'	stream; disc	harge volume	decreases
Wetland occurs at the toe of	a natural slo	ре			Other:	· ·		J	
X AA permanently flooded duri	ng drought p	eriods							
Wetland contains an outlet, b	out no inlet								
X Shallow water table and the	site is satura	ited to the sui	face						
X Other: large spring located r	near the mid	dle of the AA							
iii. Rating (use the information from i	and ii above	and the table	below to arr	ive at [circle]	the functiona	l points and	rating)		
			ARGE OR W	<u>ITH WATER</u>	tlands <i>FRON</i> R THAT IS RE TER SYSTEM	CHARGING			
Criteria		P/P		S/I	Т		None	1	
Groundwater Discharge or Recha	rge	1H		.7M	.4M		.1L	1	
Insufficient Data/Information Comments: AA with perennial inund			-	N/	A			]	
14K. Uniqueness:  . Rating (working from top to bottom,	use the mat	rix below to a	rrive at [circle	e] the function	nal points and	d rating)			
Replacement potential	or matur wetland <b>o</b>	is fen, bog, we (>80 yr-old or plant associate of the MT) is seen as the manner of the	) forested iation listed	rare types (#13) is	ot contain pres and structur high or conta on listed as "S MTNHP	al diversity ins plant	rare type	ot contain pre es or associal Il diversity (#1 moderate	tions and
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant
Low disturbance at AA (#12i)	1H	.9H	.8H	.8H	.6M	.5M	.5M	.4M	.3L
Moderate disturbance at AA (#12i)	.9H	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L
Comments: Structural diversity not en 14L. Recreation/Education Potential is the AA a known or potential recoverall summary and rating point. Check categories that apply to the control of the control o	I: (affords "b :./ed. site: (d age) ne AA: X	onus" points bircle) X (i Educational/ Other :	if AA provide if 'Yes' contin	s recreation ue with the o	or education evaluation; if '	opportunity) No' then mai	rk <b>NA</b> a		o the
Known or Potential Recreation or Ed							Known	Potential	4
Public ownership or public easem					required)		.2H	.15H	4
Duit taka attua analaha terlika mananal me	blia aaaaa	. /ma maumia							
Private ownership with general pu Private or public ownership witho							.15H .1M	.1M .05L	4

Comments: Known recreation site.

General Site Notes	
The northern portion of this AA experiences so	easonal surface hydrology and has fluctuated between wetlands and non-wetlands over the years.

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

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	18.37	
B. MT Natural Heritage Program Species Habitat	Н	0.90	1	20.66	
C. General Wildlife Habitat	E	1.00	1	22.96	*
D. General Fish Habitat	М	0.60	1	13.78	
E. Flood Attenuation	М	0.50	1	11.48	
F. Short and Long Term Surface Water Storage	Н	1.00	1	22.96	*
G. Sediment/Nutrient/Toxicant Removal	Н	0.90	1	20.66	
H. Sediment/Shoreline Stabilization	Н	1.00	1	22.96	
I. Production Export/Food Chain Support	Н	1.00	1	22.96	*
J. Groundwater Discharge/Recharge	Н	1.00	1	22.96	*
K. Uniqueness	М	0.40	1	9.18	
L. Recreation/Education Potential (bonus points)	Н	0.20	1	4.59	
Totals:		9.30	11.00	213.52	
Percent of Possible Score			85%		

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

### OVERALL ANALYSIS AREA RATING: I

Summary Comments: Overall a highly productive AA.

# MDT Montana Wetland Assessment Form (revised March 2008)

8. Wetland size:

9. Assessment area (AA):

1. Project Name: Schrieber Meadows 2. MDT Project #: NH 27 (021) Control #: 1027001

3. Evaluation Date: 10/31/2024 4. Evaluator(s): R. McEldowney 5. Wetlands/Site #(s): Enhancement

ii. Approx. Stationing or Mileposts:

iii. Watershed: 1

Watershed Name, County: Kootenai, Lincoln

7. a. Evaluating Agency: CCI for MDT

b. Purpose of Evaluation:

1. Wetlands potentially affected by MDT project

2. Mitigation wetlands; pre-construction

3. X Mitigation wetlands; post-construction

4. Other:

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

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
S	AB	NA	PP	22.00
S	EM	NA	SI	20.00
S	EM	NA	PP	58.00

Abbreviations: (see manual for definitions)

HGM Classes: Riverine (R), Depressional (D), Slope (S), Mineral Soil Flats (MSF), Organic Soil Flats (OSF), Lacustrine Fringe (LF); Cowardin Classes: Rock Bottom (RB), Unconsolidated bottom (UB), Aquatic Bed (AB), Unconsolidated Shore (US), Moss-lichen Wetland (ML), Emergent Wetland (EM), Scrub-Shrub Wetland (SS), Forested Wetland (FO)

6.790 acres (measured)

6.790 acres (measured)

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

(PD), Farmed (F), Artificial (A)

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

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

#### 12. General condition of AA:

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

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

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

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Cirsium arvense

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: AA includes existing wetlands located between stream mitigation area and US Hwy 2. The emergent wetland is dominated by reed canary grass and Alopecurus spp. Restoration efforts and beaver activity south of Schrieber Lake have resulted in increased inundation, resulting in some of the emergent wetland transitioning to aquatic bed. Adjacent land use is forest and the highway.

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

Existing # of "Cowardin" Vegetated Classes in AA	Initial Rating	Is current management existence of additional		Modified Rating
>= 3 (or 2 if 1 is forested) classes	Н	NA	NA	NA
2 (or 1 if forested) classes	M	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, and emergent wetland dominated primarily by reed canary grass.

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

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

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

Primary or critical habitat (list species) Grizzly Bear(D)

Secondary habitat (list species)

Incidental habitat (list species)

Canada Lynx(S)

North American Wolverine(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 database, MTNHP, MDT observations and reports of use from FWP, USFS, and USFWS.

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

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

Primary or critical habitat (list species)

Secondary habitat (list species)

Incidental habitat (list species)

Townsend's big-eared bat (S3)(D) - S2S3 Fischer (S3)(D) - S2S3

Western toad (S2)(D) - S2S3

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); MTNHP report. Western toad has been documented breeding onsite by MDT and USFS personnel.

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

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

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

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

Structural diversity (see #13)		High								Moderate							Low			
Class cover distribution (all vegetated classes)		Even				Uneven			Even			Uneven				Even				
Duration of surface water in >=10% of AA	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α
<b>Low</b> disturbance at AA (see #12i)	Е	E	Ε	Н	Е	E	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)

			<u> </u>	0,
Fuidance of wildlife use (i)		Wildlife habitat fe	eatures rating (ii)	
Evidence of wildlife use (i)	Exceptional	High	Moderate	Moderate
Substantial	1E	.9H	.8H	.7M
Moderate	.9H	.7M	.5M	.3L
Minimal	6M	4M	21	11

Comments: Substantial wildlife use within the AA; however, US Highway 2 abuts this area and precludes wildlife usage at various times of the day due to traffic.

**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	imal	Adec	luate	Poor		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: Visual observations.

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: 0.2L Comments: Minimal fish habitat present, no fish have been observed in AA.

**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 tream 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.

35 /	5 =	7.00	N
Flood-prone width	e Bankfull width	Entrenchment ratio (ER)	2 x Bankfull Derth



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
	****				<u> </u>	

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: Unrestricted outlet, minimal trees or shrubs present.

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

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

**Comments:** AA includes constructed wetland depressions and adjacent wetland habitat that has been created by inundation from restoration efforts. These efforts include plugging of existing ditches and channels and creation of a new stream channel.

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

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

Sediment, nutrient, and toxicant input	AA rece	ives or surro	unding land	use with	Waterbody on MDEQ list of waterbodies in need of TMDL				
levels within AA	potential to	deliver levels	s of sediment	s, nutrients,	development for "probable causes" related to sediment,				
			such that oth		nutrients, or toxicants or AA receives or surrounding land				
			lly impaired.		use with potential to deliver high levels of sediments,				
		,	of nutrients of	,	nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of				
	or si	gns of eutrop	phication pres	sent.					
					nutrients or t	oxicants, or sigi	ns of eutrophica	ition present.	
0/		700/		200/	700/				
% cover of wetland vegetation in AA		70%	< /	0%	>= 70%		< 70%		
Evidence of flooding / ponding in AA	Yes	No	Yes	No	Yes	No	Yes	No	
AA contains no or restricted outlet	<b>1H</b> .8H		.7M	.5M	.5M	.4M	.3L	.2L	
AA contains unrestricted outlet	.9H	.7M	.6M	.4M	.4M	.3L	.2L	.1L	

Comments: AA vegetated primarily with reed canarygrass, presence of flooding/ponding, restricted outlet.

**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 14L.)

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

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

Comments: Open water areas subject to wave action, well vegetated with near monoculture of reed canarygrass.

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

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

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

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

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

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

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

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

iv. Final Score and Rating: 0.90H Comments: Low fish habitat rating, vegetation component >5 ac, moderate biological activity, perennial hydrology with restricted outlet.

i. Discharge Indicators				ii	i. Recharge	Indicators					
The AA is a slope wetland				Permeable substrate present without underlying impeding layer							
 Springs or seeps are known of	or observed			Wetland contains inlet but no outlet							
Vegetation growing during do		on/drought		s	Stream is a kr	nown 'losing'	stream; disc	harge volume	e decreases		
Wetland occurs at the toe of a		_			Other:	ŭ		J			
AA permanently flooded durir	ng drought p	eriods									
Wetland contains an outlet, b											
X Shallow water table and the s	site is satura	ted to the sur	face								
X Other: Seeps are present at	the wetland	edge									
i. Rating (use the information from i a	and ii above	and the table	below to arri	ive at [circle]	the functiona	al points and	rating)				
					tlands <i>FROI</i>	•		7			
					THAT IS RE						
			<u>GI</u>	<u>ROUNDWAT</u>	ER SYSTEM	<u>!</u>					
Criteria		P/P		S/I	Т		None	<del>-</del>			
Groundwater Discharge or Rechar	ae	1H		.7M	.4M		.1L	1			
Insufficient Data/Information	3-		-	N//	A						
comments: AA with shallow water ta	ble and per	ennial surface	e water (2-3 f	eet).				_			
4K Uniqueness											
4K. Uniqueness:	uaa tha mat	riv balaw ta a	rrive at lairele	al the function	nal nainta an	d ratina)					
Rating (working from top to bottom,	use the mat	iix below to a	inve at [circle								
	AA contain	s fen, bog, w	arm springs		t contain prevant		AA does no	ot contain pre	viously cited		
Replacement potential		e (>80 yr-old)			high or conta			es or associa			
riopiassimoni potonilai		r plant associ			association listed as "S2" by the			al diversity (#1	13) is low-		
	a5 (	S1" by the MT	INF		MTNHP	-		moderate			
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant		
Low disturbance at AA (#12i)	1H	.9H	.8H	.8H	.6M	.5M	.5M	.4M	.3L		
Moderate disturbance at AA (#12i)	.9H	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L		
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L		
comments: AA with common relative	e abundance	and modera	te disturband	e due to adj	acent road.						
41 Provention/Education Potential	. (affords "b	onuo" nointo i	if A A provide	o roorootion	or advantion	onnortunitu)					
4L. Recreation/Education Potential							rk NAo	nd proceed to	a the		
Is the AA a known or potential rec		(I	i res contin	ue with the e	valuation, ii	ino tileti illa	NA a	nd proceed to	Jule		
overall summary and rating pa	• ,		:	l <b>V</b> Cam		. <b>Y</b> Nan a					
. Check categories that apply to th	ie AA: X	Educational/s	scientific stud	iy; <u>X</u> Cons	sumptive rec.	; <u>^</u> Non-c	consumptive	rec.;			
		Other :									
i. Rating:									_		
Known or Potential Recreation or Ed							Known	Potential	_		
Public ownership or public easeme					required)		.2H	.15H			
Private ownership with general pu							.15H	.1M	4		
Private or public ownership withou	ut general p	ublic access	s, or requirin	ng permissio	on for public	access	.1M	.05L	╛		
comments: Known recreation site.											
General Site Notes											

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

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	5.43	*
B. MT Natural Heritage Program Species Habitat	Н	0.90	1	6.11	
C. General Wildlife Habitat	Е	1.00	1	6.79	
D. General Fish Habitat	L	0.20	1	1.36	
E. Flood Attenuation	М	0.50	1	3.40	
F. Short and Long Term Surface Water Storage	Н	1.00	1	6.79	*
G. Sediment/Nutrient/Toxicant Removal	Н	1.00	1	6.79	*
H. Sediment/Shoreline Stabilization	Н	1.00	1	6.79	
Production Export/Food Chain Support	Н	0.90	1	6.11	*
J. Groundwater Discharge/Recharge	Н	1.00	1	6.79	
K. Uniqueness	М	0.40	1	2.72	
L. Recreation/Education Potential (bonus points)	Н	0.20	1	1.36	
Totals: Percent of Possible Score		8.90	11.00 81%	60.44	

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

### OVERALL ANALYSIS AREA RATING: I

**Summary Comments:** Most of AA is inundated by water. Emergent vegetation has been increasing in recent years.

# MDT Montana Wetland Assessment Form (revised March 2008)

8. Wetland size:

9. Assessment area (AA):

2. MDT Project #: 1. Project Name: Schrieber Meadows NH 27 (021) Control #: 1027001

3. Evaluation Date: 10/31/2024 4. Evaluator(s): R. McEldowney 5. Wetlands/Site #(s): Restoration

6. Wetland Location(s): i. Legal: T27N,R30W,11,12,13 Latitude/Longitude: 48.111359, -115.415081 : Center of AA

ii. Approx. Stationing or Mileposts:

iii. Watershed:

Watershed Name, County: Kootenai, Lincoln

7. a. Evaluating Agency: CCI for MDT

b. Purpose of Evaluation:

Wetlands potentially affected by MDT project

Mitigation wetlands; pre-construction

3. X Mitigation wetlands; post-construction

Other:

10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
D	AB	E	PP	35.00
D	EM	Е	SI	30.00
D	EM	E	PP	35.00

Abbreviations: (see manual for definitions)

HGM Classes: Riverine (R), Depressional (D), Slope (S), Mineral Soil Flats (MSF), Organic Soil Flats (OSF), Lacustrine Fringe (LF); Cowardin Classes: Rock Bottom (RB). Unconsolidated bottom (UB). Aquatic Bed (AB), Unconsolidated Shore (US), Moss-lichen Wetland (ML), Emergent Wetland (EM), Scrub-Shrub Wetland (SS), Forested Wetland (FO)

2.250 acres (measured)

2.250 acres (measured)

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

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

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

#### 12. General condition of AA:

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

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

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

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Cirsium arvense, Leucanthemum vulgare, isolated Hieracium aurantiacum

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: The AA includes pre-existing wetlands identified within the project area that were modified by excavation to increase the groundwater availability and provide a greater diversity of wetland habitat and hydrophytes.

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	M	NA	NA	NA
1 class, but not a monoculture	М	< NO	YES>	L
1 class, monoculture (1 species comprises >= 90% of total cover)	Ĺ	NA	NA	NA

Comments: Emergent and aquatic bed classes.

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

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

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

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

Grizzly Bear(D)

Incidental habitat (list species)
North American Wolverine(S)
Canada Lynx(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 database, MTNHP, MDT observations

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

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

Primary or critical habitat (list species)

Secondary habitat (list species)

Incidental habitat (list species)

Townsend's big-eared bat(D) - S2S3

Western toad (S2)(D) - S2S3

Fischer(D) - S2S3

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

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

Sources for documented use (e.g. observations, records, etc): MTNHP report. The western toad has been documented breeding onsite by MDT and USFS personnel.

### 14C. General Wildlife Habitat Rating:

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

Substantial (based on any of the following [check]):	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 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 common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, adequate adjacent upland food sources interviews with local biologists with knowledge of the AA	peak periods

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									Mod	erate				Low				
Class cover distribution (all vegetated classes)		Εν	/en			Uneven				Even Uneven					Even					
Duration of surface water in >=10% of AA	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α	P/P	S/I	T/E	Α
Low disturbance at AA (see #12i)	Е	Е	Е	Н	Е	Е	Н	Н	Е	Н	Н	М	E	Н	М	М	Е	Н	М	М
Moderate disturbance at AA (see #12i)	Н	Н	Н	Н	Н	Н	Н	М	Н	Н	М	М	Н	М	М	L	Н	М	L	L
High disturbance at AA (see #12i)	М	М	М	L	М	М	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)

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

Comments: Good habitat diversity with substantial evidence of wildlife.

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

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

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

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

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

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

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? If yes, reduce score in i above by 0.1.

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

iii. Final Score and Rating: NA Comments: No fish habitat identified within restoration AA

**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 tream 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.

 $\frac{35}{Flood-prone}$   $\frac{5}{Bankfull}$   $\frac{Entrenchment\ ratio}{ER}$ 



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: All wetland cells subject to flooding from Coyote Creek.

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

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

Comments: AA with evidence of frequent flooding.

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

NA and proceed to 14H.)

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

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

Comments: AA receives periodic overflow from Coyote Creek.

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

**Comments:** Deep rooted vegetation such as reed canary grass surrounds open water.

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

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

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

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

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

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

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

X If yes, add 0.1 to the score in ii

iv. Final Score and Rating: 1.00H Comments: No fish habitat, high biological activity, well-vegetated buffer, unrestricted outlet to creek.

i. Discharge Indicators				ii	. Recharge	Indicators				
The AA is a slope wetland					ermeable su		ent without u	nderlying imp	eding layer	
Springs or seeps are known or observed  Wetland contains inlet but						, , ,	0 ,			
Vegetation growing during dormant season/drought  Stream is a known 'losing' s					stream; disc	harge volum	e decreases			
Wetland occurs at the toe of	a natural slo	ре			ther:			•		
X AA permanently flooded during drought periods										
Wetland contains an outlet, b	out no inlet									
X Shallow water table and the	site is satura	ted to the sur	face							
X Other: Seeps are present at	the wetland	edge								
III Deting (upo the information from i	and ii ahaya	and the table	halaw ta arr	iva at [airala]	the functions	l nainta and	ratina)			
iii. Rating (use the information from i	and ii above			on at AA Wet			<u> </u>	1		
				ITH WATER						
				ROUNDWAT						
Criteria		P/P		S/I	Т		None	1		
Groundwater Discharge or Recha	rae	1H		.7M	.4M		.1L	1		
Insufficient Data/Information			-	N/A	4	<del></del>		1		
Comments: Perennial spring located	l near AA.							-		
14K. Uniqueness:										
i. Rating (working from top to bottom,	usa tha mati	riv halow to a	rrive at [circle	al the function	nal nointe an	d rating)				
i. Rating (working from top to bottom,	use the mati	ix below to a	TIVE at [CITCIE	<del>.</del>	•		i			
	AA contain	s fen, bog, w	arm springs		t contain prev and structure				viously cited	
Replacement potential					(#13) is high <b>or</b> contains plant			rare types or associations <b>and</b> structural diversity (#13) is low-		
		S1" by the MT		associatio	on listed as "S	S2" by the	moderate			
Estimated relative above days a (HAA)			1		MTNHP	-1			a la consulta de la	
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	.4M	abundant	
Low disturbance at AA (#12i)	1H	.9H	.8H	.8H .7M	.6M	.5M	.5M		.3L	
Moderate disturbance at AA (#12i)	.9H .8H	.8H .7M	.7M .6M	.7 M	.5M .4M	.4M .3L	.4M .3L	.3L .2L	.2L .1L	
High disturbance at AA (#12i)  Comments: Site was moderately dis			_	_			.JL	.ZL	.1L	
Comments. One was moderately dis	tarbea belon	c and anci co	nistraction be	at rias low dis	starbarioc at i	ino unio.				
14L. Recreation/Education Potentia	I: (affords "b	onus" points i	if AA provide	s recreation o	or education	opportunity)				
i. Is the AA a known or potential red	:./ <b>ed. site:</b> (c	ircle) X (i	f 'Yes' contin	ue with the e	valuation; if '	No' then mai	rk <b>NA</b> a	nd proceed to	o the	
overall summary and rating pa	age)									
ii. Check categories that apply to the	ne AA: X	Educational/s	scientific stud	ly;Cons	sumptive rec.	; <u>X</u> Non-c	onsumptive	rec.;		
		Other:								
iii. Rating:		•								
Known or Potential Recreation or Ed	Known or Potential Recreation or Education Area Known Potential								7	
Public ownership or public easement with general public access (no permission required) .2H .15H								7		
Private ownership with general public access (no permission required) .15H .1M							7			
Private or public ownership witho	Private or public ownership without general public access, or requiring permission for public access .1M .05L									
Comments: Known recreation site									_	
General Site Notes  Most of AA inundated throughout the										

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

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	1.80	
B. MT Natural Heritage Program Species Habitat	Н	0.90	1	2.03	
C. General Wildlife Habitat	Е	1.00	1	2.25	*
D. General Fish Habitat	NA				
E. Flood Attenuation	М	0.50	1	1.13	
F. Short and Long Term Surface Water Storage	Н	0.80	1	1.80	
G. Sediment/Nutrient/Toxicant Removal	М	0.60	1	1.35	
H. Sediment/Shoreline Stabilization	Н	1.00	1	2.25	*
I. Production Export/Food Chain Support	Н	1.00	1	2.25	*
J. Groundwater Discharge/Recharge	Н	1.00	1	2.25	*
K. Uniqueness	М	0.40	1	0.90	
L. Recreation/Education Potential (bonus points)	Н	0.20	1	0.45	
Totals: Percent of Possible Score		8.20	10.00 82%	18.46	

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

### OVERALL ANALYSIS AREA RATING: I

**Summary Comments:** This AA is highly productive, as evidenced by abundant wildlife and vegetative cover.

Scientific Name	Common Name	WMVC Indicator Status <sup>(a)</sup>
Achillea millefolium	Common Yarrow	FACU
Achnatherum nelsonii	Columbia Needlegrass	UPL
Agastache urticifolia	Nettleleaf Giant Hyssop	FACU
Agropyron cristatum	Crested Wheatgrass	UPL
Agropyron spp.	Wheatgrass	N/A
Agrostis capillaris	Colonial Bentgrass	FAC
Agrostis exarata	Spike Bentgrass	FACW
Agrostis gigantea	Redtop	FAC
Agrostis scabra	Rough Bentgrass	FAC
Agrostis stolonifera	Spreading Bentgrass	FACW
Algae, brown	Algae, brown	N/A
Algae, green	Algae, green	N/A
Alisma gramineum	Narrowleaf Water Plaintain	OBL
Alisma triviale	Northern Water Plantain	OBL
Alnus incana	Speckled Alder	FACW
Alopecurus aequalis	Shortawn Foxtail	OBL
Alopecurus arundinaceus	Creeping Meadow Foxtail	FAC
Alopecurus pratensis	Field Meadow Foxtail	FAC
Amelanchier alnifolia	Saskatoon Serviceberry	FACU
Antennaria microphylla	Littleleaf Pussytoes	UPL
Arctium minus	Lesser Burdock	UPL
Arnica chamissonis	Chamisso Arnica	FACW
Aster sp.	Aster	N/A
Beckmannia syzigachne	American Sloughgrass	OBL
Bromus briziformis	Rattlesnake Brome	UPL
Bromus carinatus	California Brome	UPL
Bromus inermis	Smooth Brome	FAC
Bromus tectorum	Cheatgrass	UPL
Calamagrostis canadensis	Bluejoint	FACW
Carex atherodes	Wheat Sedge	OBL
Carex aquatilis	Leafy Tussock Sedge	OBL
Carex athrostachya	Slenderbeak Sedge	FACW
Carex bebbii	Bebb's Sedge	OBL
Carex lasiocarpa	Woollyfruit Sedge	OBL
Carex microptera	Smallwing Sedge	FACU
Carex nebrascensis	Nebraska Sedge	OBL
Carex pachystachya	Chamisso Sedge	FAC
Carex pellita	Woolly Sedge	OBL

Scientific Name	Common Name	WMVC Indicator Status <sup>(a)</sup>
Carex scoparia	Broom Sedge	FACW
Carex spp.	Sedge	N/A
Carex stipata	Awlfruit Sedge	OBL
Carex utriculata	Northwest Territory Sedge	OBL
Carex vesicaria	Blister Sedge	OBL
Centaurea stoebe	Spotted Knapweed	UPL
Cerastium arvense	Field Chickweed	FACU
Cerastium fontanum	Common Mouse Ear Chickweed	FACU
Ceratophyllum demersum	Coon's Tail	OBL
Chara spp.	Muskgrass	N/A
Cirsium arvense	Canadian Thistle	FAC
Cirsium vulgare	Bull Thistle	FACU
Collomia linearis	Tiny Trumpet	FACU
Crataegus douglasii	Black Hawthorn	FAC
Cynoglossum officinale	Houndstongue	FACU
Dactylis glomerata	Orchard Grass	FACU
Deschampsia cespitosa	Tufted Hairgrass	FACW
Descurainia pinnata	Western Tansymustard	UPL
Eleocharis flavescens	Yellow Spike-Rush	OBL
Eleocharis palustris	Common Spike-Rush	OBL
Eleocharis quinqueflora	Few-Flower Spike-Rush	OBL
Elymus lanceolatus	Streamside Wild Rye	FACU
Elymus repens	Creeping Wild Rye	FAC
Elymus trachycaulus	Slender Wild Rye	FAC
Epilobium brachycarpum	Tall Annual Willowherb	FAC
Epilobium ciliatum	Fringed Willowherb	FACW
<i>Epilobium</i> sp.	Willowherb	N/A
Equisetum arvense	Field Horsetail	FAC
Equisetum hyemale	Tall Scouring-Rush	FACW
Erysimum cheiranthoides	Worm-Seed Wallflower	FACU
Festuca idahoensis	Idaho Fescue	FACU
Festuca rubra	Red Fescue	FAC
Fragaria virginiana	Virginia Strawberry	FACU
Galium mexicanum	Mexican Bedstraw	FAC
Galium trifidum	Threepetal Bedstraw	FACW
Geum macrophyllum	Largeleaf Avens	FAC
Glyceria elata	Tall Mannagrass	FACW
Glyceria grandis	American Mannagrass	OBL

Scientific Name	Common Name	WMVC Indicator Status <sup>(a)</sup>
Glyceria spp.	Mannagrass	N/A
Glyceria striata	Fowl Mannagrass	OBL
Gnaphalium palustre	Western Marsh Cudweed	FACW
Hieracium aurantiacum	Orange Hawkweed	UPL
Hippuris vulgaris	Common Mare's-Tail	OBL
Juncus articulatus	Jointleaf Rush	OBL
Juncus bufonius	Toad Rush	FACW
Juncus confusus	Colorado Rush	FAC
Juncus ensifolius	Swordleaf Rush	FACW
Juncus nodosus	Knotted Rush	OBL
Juncus tenuis	Lesser Poverty Rush	FAC
Lactuca serriola	Prickly Lettuce	FACU
Lemna minor	Common Duckweed	OBL
<i>Lepidium</i> sp.	Pepperwort	N/A
Leucanthemum vulgare	Ox-Eye Daisy	FACU
Lotus corniculatus	Bird's Foot Trefoil	FAC
Mahonia repens	Creeping Barberry	UPL
Marsilea vestita	Hairy Waterclover	OBL
Matricaria discoidea	Pineappleweed	FACU
Medicago lupulina	Black Medick	FACU
Mentha arvensis	American Wild Mint	FACW
Mimulus guttatus	Seep Monkeyflower	OBL
Myriophyllum sibiricum	Siberian Watermilfoil	OBL
Nasella viridula	Green Needlegrass	UPL
Pascopyrum smithii	Western Wheatgrass	FACU
Pedicularis groenlandica	Elephanthead Lousewort	OBL
Penstemon confertus	Yellow Penstemon	UPL
Peritoma serrulata	Rocky Mountain Beeplant	FACU
Persicaria amphibia	Water Smartweed	OBL
Persicaria lapathifolia	Dockleaf Smartweed	FACW
Persicaria maculosa	Spotted Lady's Thumb	FACW
Phalaris arundinacea	Reed Canarygrass	FACW
Phleum pratense	Common Timothy	FACU
Picea engelmannii	Engelmann Spruce	FAC
Pinus contorta	Lodgepole Pine	FAC
Pinus ponderosa	Ponderosa Pine	FACU
Plantago major	Common Plantain	FAC
Poa palustris	Fowl Bluegrass	FAC

Scientific Name	Common Name	WMVC Indicator Status <sup>(a)</sup>
Poa pratensis	Kentucky Bluegrass	FAC
Poa sp.	Bluegrass	N/A
Polygonum douglasii	Douglas' Knotweed	FACU
Polypogon monspeliensis	Annual Rabbitsfoot Grass	FACW
Populus balsamifera	Balsam Poplar	FAC
Potamogeton foliosus	Leafy Pondweed	OBL
Potamogeton natans	Broadleaf Pondweed	OBL
Potentilla gracilis	Graceful Cinquefoil	FAC
Potentilla norvegica	Norwegian Cinquefoil	FAC
Prunella vulgaris	Common Selfheal	FACU
Pseudotsuga menziesii	Douglas Fir	FACU
Ranunculus aquatilis	White Water Crowfoot	OBL
Ranunculus sceleratus	Cursed Buttercup	OBL
Rosa woodsii	Woods' Rose	FACU
Rumex acetosella	Common Sheep Sorrel	FACU
Rumex crispus	Curly Dock	FAC
Salix bebbiana	Bebb's Willow	FACW
Salix candida	Sageleaf Willow	OBL
Salix drummondiana	Drummond's Willow	FACW
Salix lutea	Yellow Willow	OBL
Schedonorus pratensis	Meadow Fescue	FACU
Scirpus cyperinus	Woolgrass	OBL
Scirpus microcarpus	Panicled Bulrush	OBL
Senecio hydrophiloides	Tall Groundsel	FACW
Sisymbrium altissimum	Tall Tumblemustard	FACU
Solidago canadensis	Canadian Goldenrod	FACU
Sparganium emersum	European Bur-Reed	OBL
Sparganium natans	Arctic Burr-Reed	OBL
Spiranthes romanzoffiana	Hooded Lady's Tresses	FACW
Stellaria longipes	Longstalk Starwort	FACW
Stuckenia pectinata	Sago Pondweed	OBL
Suaeda calceoliformis	Pursh Seepweed	FACW
Symphoricarpos albus	Common Snowberry	FACU
Symphyotrichum spathulatum	Western Mountain Aster	FAC
Taraxacum officinale	Common Dandelion	FACU
Thlaspi arvense	Field Pennycress	UPL
Trifolium arvense	Rabbitfoot Clover	UPL
Trifolium campestre	Field Clover	UPL

Scientific Name	Common Name	WMVC Indicator Status <sup>(a)</sup>
Trifolium hybridum	Alsike Clover	FAC
Trifolium pratense	Red Clover	FACU
Trifolium repens	White Clover	FAC
Triglochin maritima	Seaside Arrowgrass	OBL
Typha latifolia	Broadleaf Cattail	OBL
Verbascum thapsus	Common Mullein	FACU
Veronica americana	American Speedwell	OBL
Veronica anagallis-aquatica	Water Speedwell	OBL
Veronica peregrina	Neckweed	OBL
Veronica scutellata	Skullcap Speedwell	OBL
Veronica serpyllifolia	Thymeleaf Speedwell	FAC

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

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

NL indicator changed to UPL for species.

# APPENDIX C PROJECT AREA PHOTOGRAPHS

MDT Wetland Mitigation Monitoring Schrieber Meadows Lincoln County, Montana



Photo Point 1; Location: SW Corner of site; Bearing 270 degrees; Year 2012



Photo Point 1; Location: SW Corner of site; Bearing 270 degrees; Year: 2024



Photo Point 3; Location: Cell 2 (Constructed in 2007); Bearing 90 degrees; Year 2010



Photo Point 3 – Location: Cell 2 (Constructed in 2007); Bearing 90 degrees; Year 2024



Photo Point 4; Location: Cell 2 (Constructed in 2007); Bearing 180 degrees; Year 2010



Photo Point 4; Location: Cell 2 (Constructed in 2007); Bearing 180 degrees; Year 2024



Photo Point 5; Location: Cell 2 (Constructed in 2007); Bearing 300 degrees; Year 2010



Photo Point 5; Location: Cell 2 (Constructed in 2007); Bearing 300 degrees; Year 2024



Photo Point 6; Location: Cell 2 (Constructed in 2007); Bearing 40 degrees; Year 2010



Photo Point 6; Location: Cell 2 (Constructed in 2007); Bearing 40 degrees; Year 2024



Photo Point 7; Location: Lower Coyote Creek; Bearing 0 degrees; Year 2012



Photo Point 7; Location: Lower Coyote Creek; Bearing 0 degrees; Year 2024



Photo Point 10; Location: Cell 3; Bearing 0 degrees; Year 2010



Photo Point 10; Location: Cell 3; Bearing 0 degrees; Year 2024



Photo Point 11; Location: Cell 2B; Bearing 190 degrees; Year 2012



Photo Point 11; Location: Cell 2B; Bearing 190 degrees; Year 2024



Photo Point 12; Location: Cell 1 (Constructed in 2011); Bearing 180 degrees; Year 2012



Photo Point 12; Location: Cell 1 (Constructed in 2011); Bearing 180 degrees; Year 2024



Photo Point 13; Cell 3A (Constructed in 2011); Bearing 280 degrees; Year 2012



Photo Point 13; Cell 3A (Constructed in 2011); Bearing 280 degrees; Year 2024

# **Schrieber Meadows: Photo Point Panorama Photographs**



Photo Point 14; Location: Cell 4C (Constructed in 2011); Bearing 230 degrees; Year 2012



Photo Point 14; Location: Cell 4C (Constructed in 2011); Bearing 230 degrees; Year 2024



Photo Point 15; Location: Cell 5A (Constructed in 2011); Bearing 180 degrees; Year 2012



Photo Point 15; Location: Cell 5A (Constructed in 2011); Bearing 180 degrees; Year 2024

# **Schrieber Meadows: Photo Point Panorama Photographs**



Photo Point 16; Cell 6 (Constructed in 2011); Bearing 70 degrees; Year 2012



Photo Point 16; Cell 6 (Constructed in 2011); Bearing 70 degrees; Year 2024



Photo Point 17; Location: Cell 6 (Constructed in 2011); Bearing 270 degrees; Year 2012



Photo Point 17; Location: Cell 6 (Constructed in 2011); Bearing 270 degrees; Year 2024



Photo Point 2 Location: Cell 7 (Created in 2007)

Bearing: 150 degrees Year: 2010



Photo Point 8 Location: Cell 3 (Constructed 2007)

Bearing: 190 degrees Year: 2010



Photo Point 9 Location: Cell 3
Bearing: 280 degrees Year: 2010



Photo Point 2 Location: Cell 7 (Created 2007)

Bearing: 150 degrees Year: 2024



Photo Point 8 Location: Cell 3 (Constructed 2007)

Bearing: 190 degrees Year: 2024



Photo Point 9 Location: Cell 3
Bearing: 280 degrees Year: 2024



Photo Point 16 Bearing: 290 degrees

Location: Cell 5A Year: 2010



**Photo Point 18 Location:** Cell 3 (Constructed 2007) **Bearing:** 90 degrees **Year:** 2012



Photo Point 19
Bearing: 10 degrees

Location: West Boundary

**Year:** 2012



Photo Point 16 Bearing: 290 degrees



Year: 2023

Photo Point 18 Location: Cell 3 (Constructed 2007)

**Bearing:** 90 degrees Year: 2024



Photo Point 19

Location: West Boundary

Bearing: 10 degrees Year: 2024



Photo Point 19 Bearing: 100 degrees

**Location:** West Boundary **Year:** 2012



Photo Point 19 Location
Bearing: 100 degrees Year

# **Schrieber Meadows: Vegetation Transect Photographs**



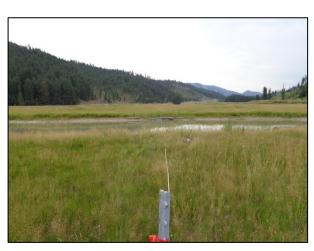
Transect 1: Start Bearing: 115 degrees





Transect 1: End Bearing: 295 degrees

Location: T-1 Year: 2010



Transect 2: Start
Bearing: 100 degrees

Location: T-2 Year: 2013



Transect 1: Start
Bearing: 115 degrees

Location: T-1 Year: 2024



Transect 1: End
Bearing: 295 degrees

Location: T-1 Year: 2024



Transect 2: Start
Bearing: 100 degrees

Location: T-2 Year: 2024

# **Schrieber Meadows: Vegetation Transect Photographs**



Transect 2: End Bearing 280: degrees





**Transect 2: End** Bearing 280: degrees

Location: T-2 Year: 2024



**Transect 3: Start** Bearing: 45 degrees

Location: T-3 **Year:** 2012



Bearing: 45 degrees

**Transect 3: Start** Location: T-3 Year: 2024



**Transect 3: End** Bearing: 225 degrees

Location: T-3 Year: 2012



**Transect 3: End** Bearing: 225 degrees

Location: T-3 Year: 2024



Data Point: DP01w Year: 2024





Data Point: DP01u Year: 2024

Location: Near Hwy



Data Point: DP02w Year: 2024

Location: Veg Com 3



Data Point: DP02u Year: 2024

Location: Near Hwy



Data Point: DP03w

Year: 2024

Location: Veg Com 3



Data Point: DP03u

Location: SE of site

Year: 2024



Data Point: DP04w Year: 2024

Location: Veg Com 3



Data Point: DP04u

Location: SW of site

Year: 2024



Data Point: DP05w Year: 2024

Location: Veg Com 3



Data Point: DP05u

Location: SW of site



Data Point: DP06w

Year: 2024

Location: Veg Com 3



Data Point: DP06u

Location: Veg Com 18

Year: 2024



Data Point: DP07w Year: 2024

Location: Veg Com 3



Data Point: DP07u

Location: Veg Com 8

Year: 2024



Data Point: DP08w Year: 2024

Location: Veg Com 3



Data Point: DP08u

Location: Veg Com 8



Data Point: DP09w

Year: 2024



Location: Veg Com 15



Data Point: DP09u

**Location:** Near Hwy

Year: 2024



Data Point: DP10w

Year: 2024



Data Point: DP10u

Location: Veg Com 17

Year: 2024



**Cross-Section: XS-1** Location: Upper Coyote Creek Bearing: 280 degrees Year: 2012



**Cross-Section: XS-1** Location: Upper Coyote Creek Bearing: 280 degrees Year: 2024



**Cross-Section: XS-2** Location: Upper Coyote Creek Bearing: 320 degrees Year: 2012



**Cross-Section: XS-2** Location: Upper Coyote Creek Bearing: 320 degrees Year: 2024



**Cross-Section: XS-3** Location: Coyote Creek Spring Area Bearing: 320 degrees Year: 2012



Cross-Section: XS-3 Location: Coyote Creek Spring Area Bearing: 320 degrees Year: 2024



**Cross-Section: XS-4** Location: Middle Coyote Creek Bearing: 290 degrees Year: 2012



**Cross-Section: XS-4 Location:** Middle Coyote Creek **Bearing:** 290 degrees **Year:** 2024



**Cross-Section: XS-5** Location: Middle Coyote Creek Bearing: 150 degrees Year: 2012



**Cross-Section: XS-5 Location:** Middle Coyote Creek **Bearing:** 150 degrees **Year:** 2024



Cross-Section: XS-6 Location: Perennial Spring
Creek Bearing: 90 degrees Year: 2012



Cross-Section: XS-6 Location: Perennial Spring
Creek Bearing: 90 degrees Year: 2024



**Cross-Section: XS-7 Location:** Middle Coyote Creek **Bearing:** 90 degrees **Year:** 2012



**Cross-Section: XS-7 Location:** Middle Coyote Creek **Bearing:** 220 degrees **Year:** 2024



**Cross-Section: XS-8** Location: Middle Coyote Creek Bearing: 170 degrees Year: 2012



**Cross-Section: XS-8** Location: Middle Coyote Creek Bearing: 170 degrees Year: 2024



**Cross-Section: XS-9 Location:** Middle Coyote Crk/ Schrieber Crk **Bearing:** 130 degrees **Year:** 2012



**Cross-Section: XS-9 Location:** Middle Coyote Crk/ Schrieber Crks **Bearing:** 130 degrees **Year:** 2024



**Cross-Section: XS-10 Location:** Middle Coyote Crk/ Schrieber Crks **Bearing:** 140 degrees **Year:** 2012



**Cross-Section: XS-10 Location:** Middle Coyote Crk/ Schrieber Crks **Bearing:** 270 degrees **Year:** 2024



**Cross-Section: XS-11 Location:** Middle Coyote Crk/ Schrieber Crks **Bearing:** 100 degrees **Year:** 2012



**Cross-Section: XS-11 Location:** Middle Coyote Crk/ Schrieber Crks **Bearing:** 100 degrees **Year:** 2024

# APPENDIX D STREAM CROSS SECTIONS

MDT Wetland Mitigation Monitoring Schrieber Meadows Lincoln County, Montana

