

Aquatic Resources Inventory Report



I-25/I-80 Interchange Aquatic Resources Inventory Report

Wyoming Department of Transportation



Aquatic Resources Inventory Report

For the

I-25/I-80 Interchange Project Laramie County

WYDOT Project Number I806212 FHWA-WYDOT-EA-20-01

Prepared for:

Wyoming Department of Transportation and
U.S. Department of Transportation
Federal Highway Administration

Prepared by: **Jacobs Engineering Group Inc.**

February 2020



I-25/I-80 INTERCHANGE

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1 Aquatic Resources Identified in the I-25/I-80 Interchange Study Area



1.0 Introduction

The Wyoming Department of Transportation (WYDOT) and the Federal Highway Administration (FHWA) are proposing to replace the existing Interstate (I) 25/I-80 and I-25/U. S. Highway 30 (Lincolnway) interchanges (project) at the southwestern corporate limits of the City of Cheyenne in Laramie County, Wyoming (Figure 1). The I-25/I-80 interchange is one of two system-level interchanges in Wyoming and is the most heavily trafficked interchange in the state, serving as a critical transportation hub facilitating the local, regional, and national movement of people and goods. Also included in the project and located approximately 0.5 mile north of the I-25/I-80 interchange, the I-25/Lincolnway interchange would be replaced. Lincolnway is the main arterial roadway directly connecting Cheyenne to the interstate system. The need for the project is driven by crashes, increasing travel demands, and the support of Cheyenne's future development goals.

The project is in the Moderate Relief Rangeland Level IV Ecoregion of the High Plains Level III-Ecoregion (Chapman et al. 2004).

The U.S. Army Corps of Engineers (USACE) is authorized under Section 404 of the Clean Water Act (33 U.S.Code 1344) to regulate the placement of dredged and fill material into wetlands and other waters of the United States. The term "waters of the United States" includes all waters that were, are, or could be used in interstate commerce such as rivers, streams (including ephemeral streams), reservoirs, lakes, and wetlands adjacent to those areas.

2.0 Methods

2.1: Pre-field Investigation

General information on vegetation, soils, hydrology, and existing wetlands were reviewed before the field survey. Data sources included U.S. Geological Survey topographic maps, National Wetland Inventory (USFWS 2019), National Hydrography Database (USGS 2019), U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey (2019), and satellite imagery (Google Earth Pro 2019).

2.2: Field Survey

Jacobs Engineering Group Inc. (Jacobs) biologists Rachel Newton and Dan Soucy conducted the aquatic resources delineation on July 30 through August 1, 2019. The field survey was limited to the 615.17-acre study area, which includes all potential areas of project disturbance. The survey methodology followed the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987), the ordinary high water mark (OHWM) regulatory guidance letter No. 05-05 (USACE 2005), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region Version 2.0 (USACE 2010). Wetland indicator statuses for plants were taken from The National Wetland Plant List: 2016 Wetland Ratings

1



(Lichvar et al. 2016). Wetlands were classified using *Wetlands of the United States* (Shaw and Fredine 1971).

The field delineation identified and delineated all aquatic resources, including wetlands and other waters. Where aquatic resources were identified, feature boundaries were mapped using a handheld global position system (GPS) unit with submeter accuracy. Data were collected in North American Datum of 1983 Wyoming State Plane Zone East in U.S. survey feet. Geographic information system (GIS) data were post-processed using ArcGIS 10.4. The field sampling procedures and methods used to delineate and map aquatic resources followed protocol as detailed in the references cited in this section.

3.0 Results

The field delineation identified a total of approximately 31.432 acres of wetland (27 palustrine emergent and 4 palustrine scrub-shrub), 0.815 acre of open water, and 0.117 acre (330 linear feet) of other waters in the study area, consisting of one perennial channel.

Table 1 summarizes the types and amounts of possible waters of the U.S. identified in the study area, and includes descriptions of the delineated features. Figure 3 shows mapped locations of aquatic resources. USACE wetland and OHWM datasheets are presented in Appendix A. Representative photographs are presented in Appendix B.

4.0 Functions and Quality

Wetlands within the study area provide several functions, including sediment, nutrient, toxicant retention and removal, short- and long-term surface water storage, and groundwater recharge. These wetlands also provide forage and cover for wildlife, including birds and small mammals. Wetlands in on/off-ramp islands and immediately adjacent to interstates are more likely to contain garbage, lowering overall quality. Other wetlands in less developed areas have greater plant and animal species diversity.

5.0 References

- Chapman, S.S., S.A. Bryce, J.M. Omernik, D.G. Despain, J. ZumBerge, and M. Conrad. 2004. *Ecoregions of Wyoming* (color poster with map, descriptive text, summary tables, and photographs). Reston, Virginia, U.S. Geological Survey (map scale 1:1,400,000).
- Cowardin L.M., V.C. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service. FWS/OBS-79/31. Washington, D.C.
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- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 wetland ratings. Phytoneuron* 2016-30: 1-17. April 28. ISSN 2153 733X. https://www.fws.gov/wetlands/documents/National-Wetland-Plant-List-2016-Wetland-Ratings.pdf.
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- U.S. Army Corps of Engineers (USACE). 2005. Regulatory Guidance Letter. *RGL* 05-05. Ordinary High Water Mark (OHWM) Identification. December 7. http://www.nap.usace.army.mil/Portals/39/docs/regulatory/rgls/rgl05-05.pdf.
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- U.S. Fish and Wildlife Service (USFWS). 2019. National Wetlands Inventory (NWI) Data Download. http://www.fws.gov/wetlands/Data/Data-Download.html
- U.S. Geological Survey (USGS). 2019. *National Hydrography Data Set*. https://www.usgs.gov/core-science-systems/ngp/national-hydrography-dataset.



Figures

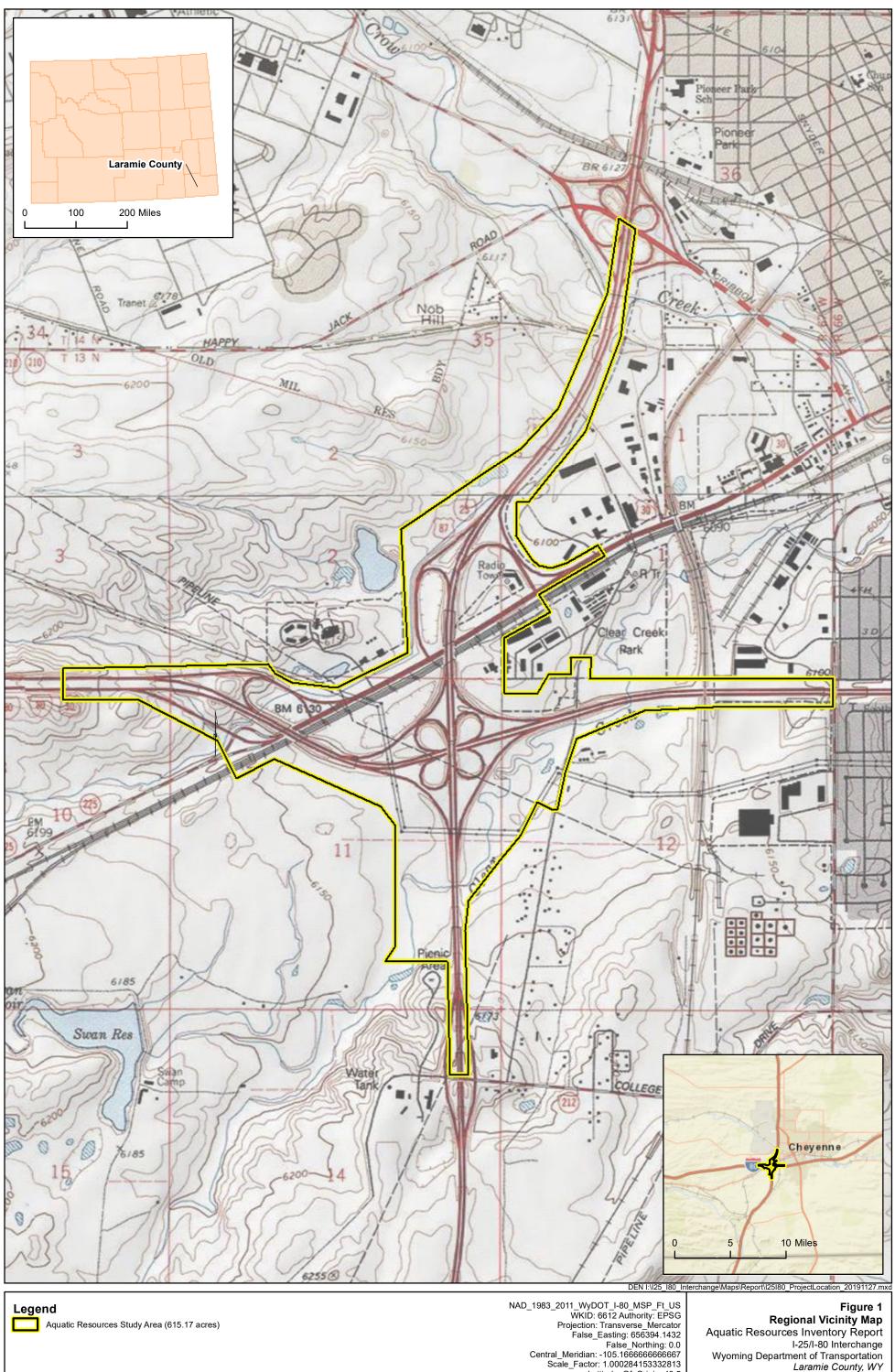
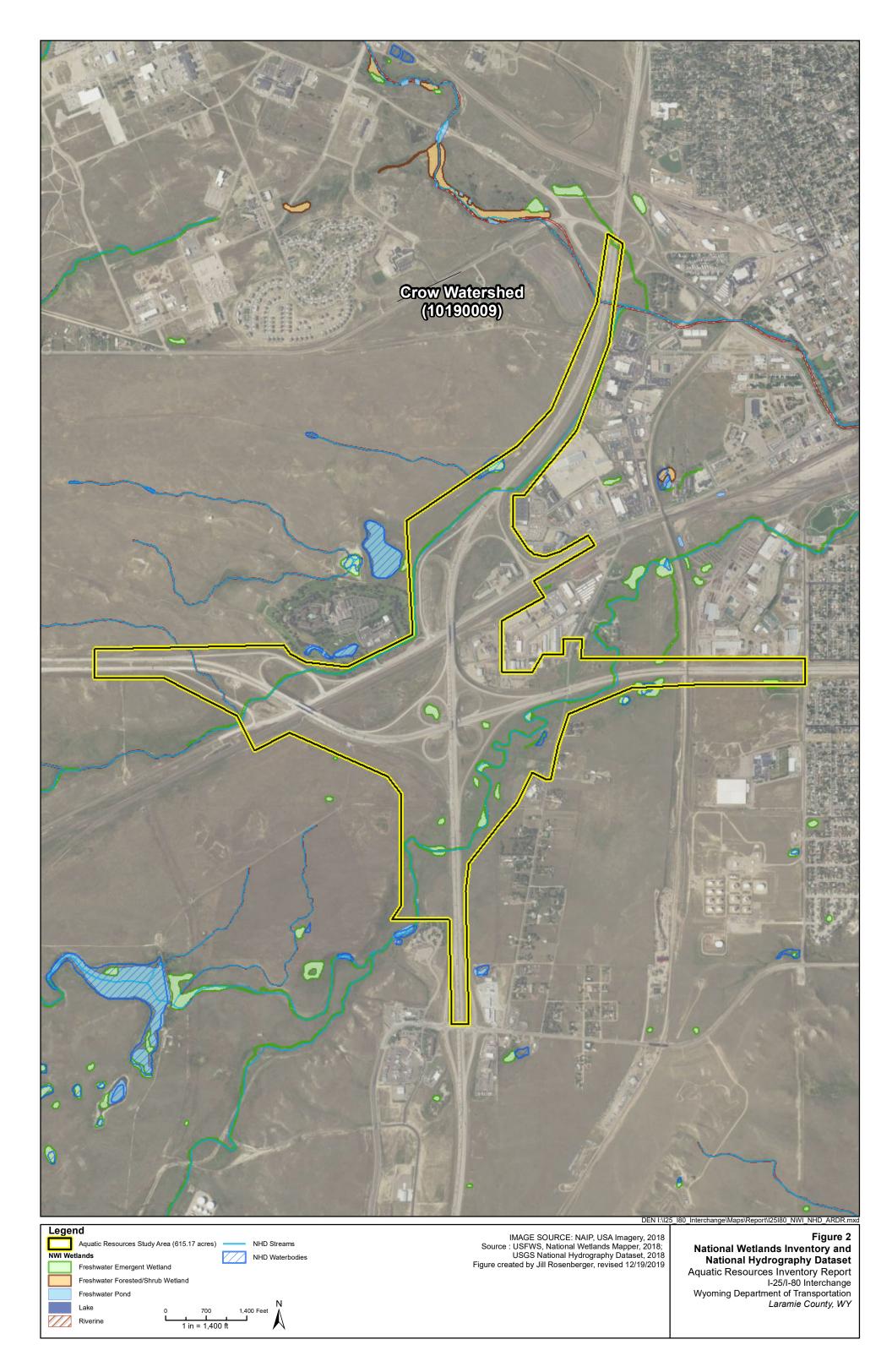
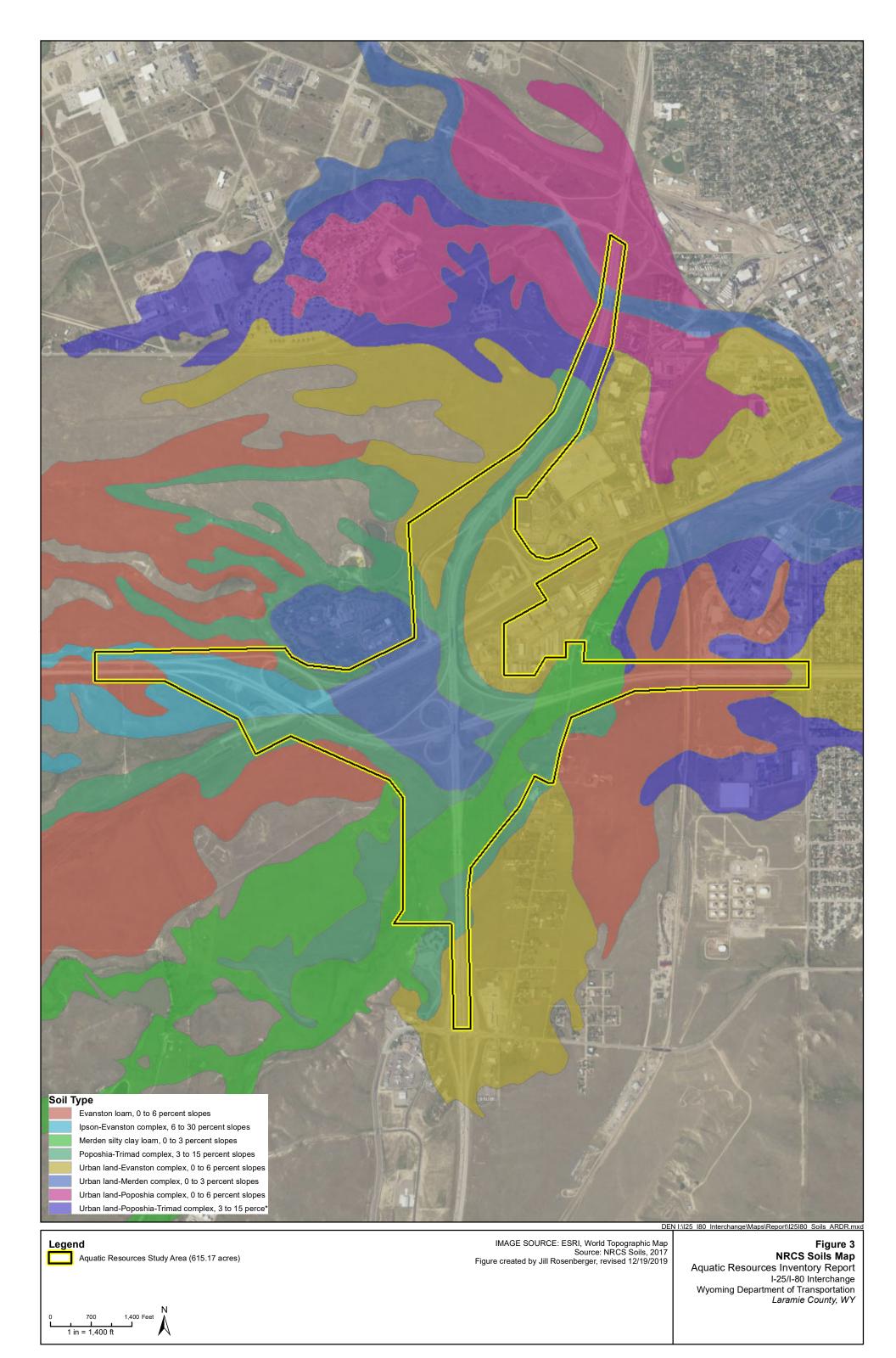


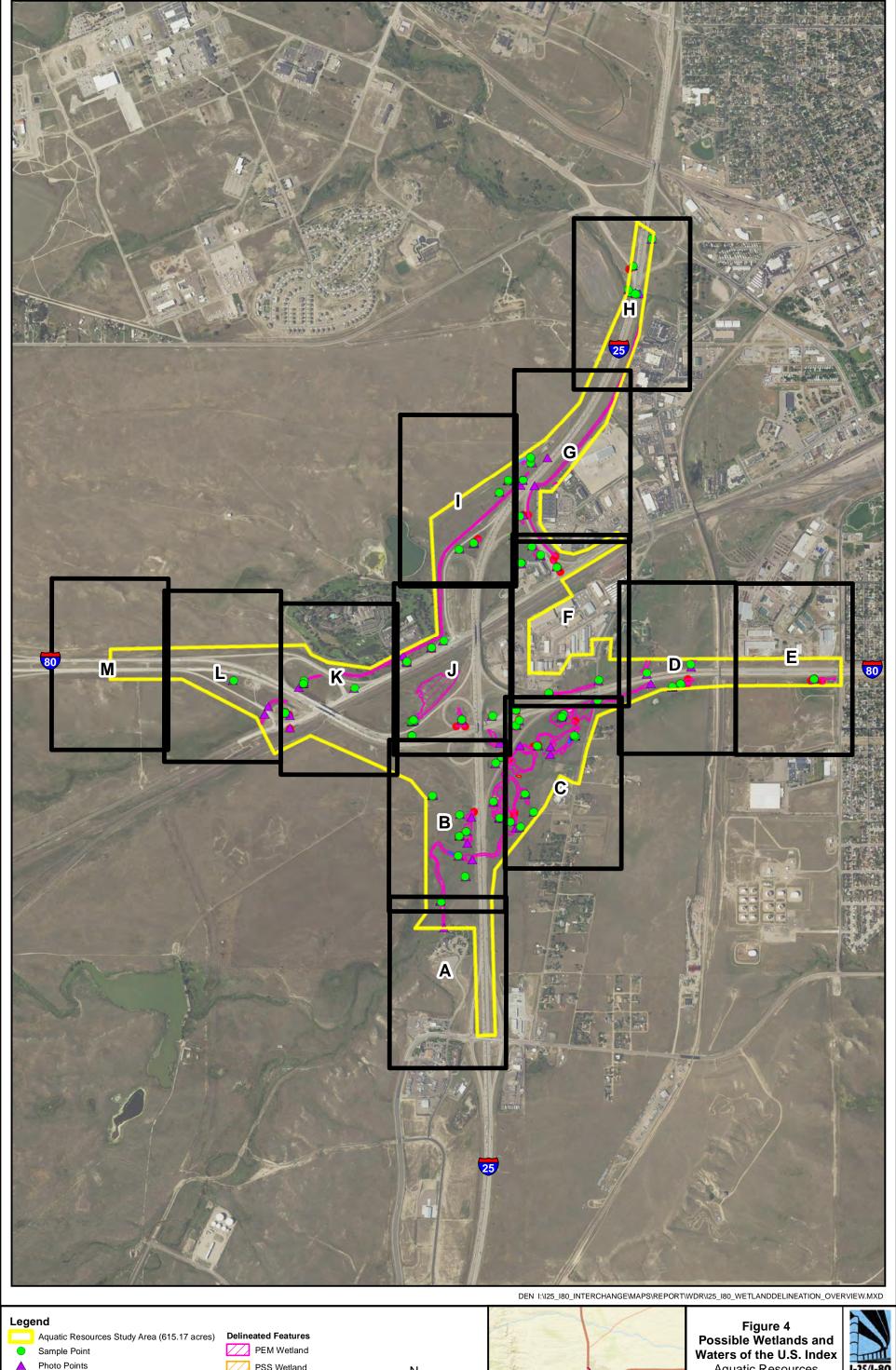
IMAGE SOURCE: ESRI, World Topographic Map Figure created by Jill Rosenberger, revised 12/19/2019

Wyoming Department of Transportation Laramie County, WY

Latitude_Of_Origin: 40.5
Linear Unit: Foot_US (0.3048006096012192)
USGS Quads: Cheyenne North, Cheyenne South









1,500 1 inch = 1,500 feet

Aquatic Resources Delineation Report

I-25 / I-80 Interchange Laramie County, Wyoming





Date: 1/13/2020



Aquatic Resources Study Area (615.17 acres) Delineated Features

Sample Point

Photo Point

Delineated Features
PEM Wetland

PSS Wetland
Open Water
Channel

Aerial Imagery: NAIP, 2018
Delineation completed on July 30 through
August 1, 2019, by Rachel Newton/Jacobs and Dan Soucy/Jacobs.
Prepared by Jill Rosenberger/Jacobs on November 4, 2019.

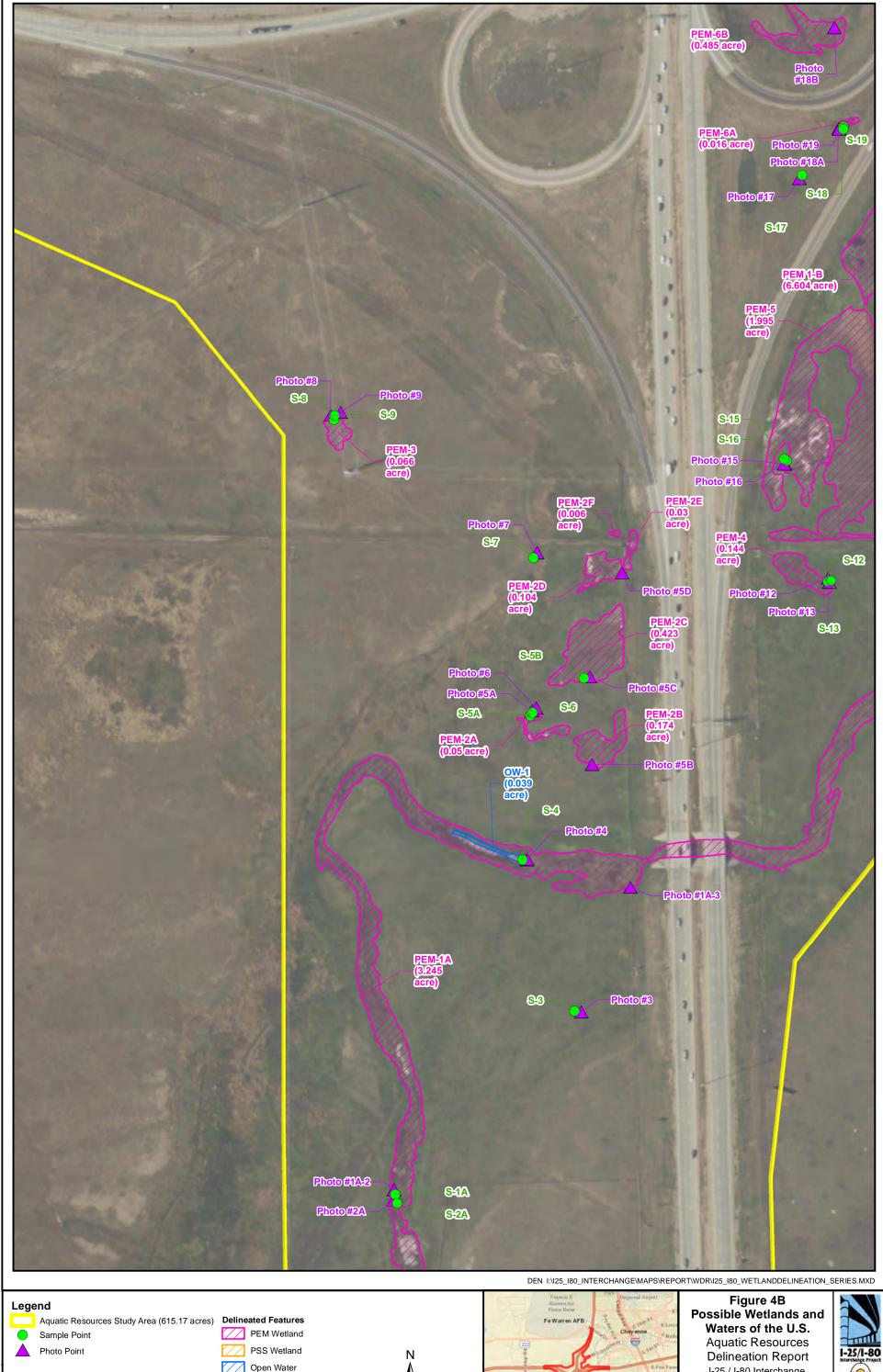
0 200 1 inch = 200 feet



Figure 4A
Possible Wetlands and
Waters of the U.S.
Aquatic Resources
Delineation Report
I-25 / I-80 Interchange
Laramie County, Wyoming







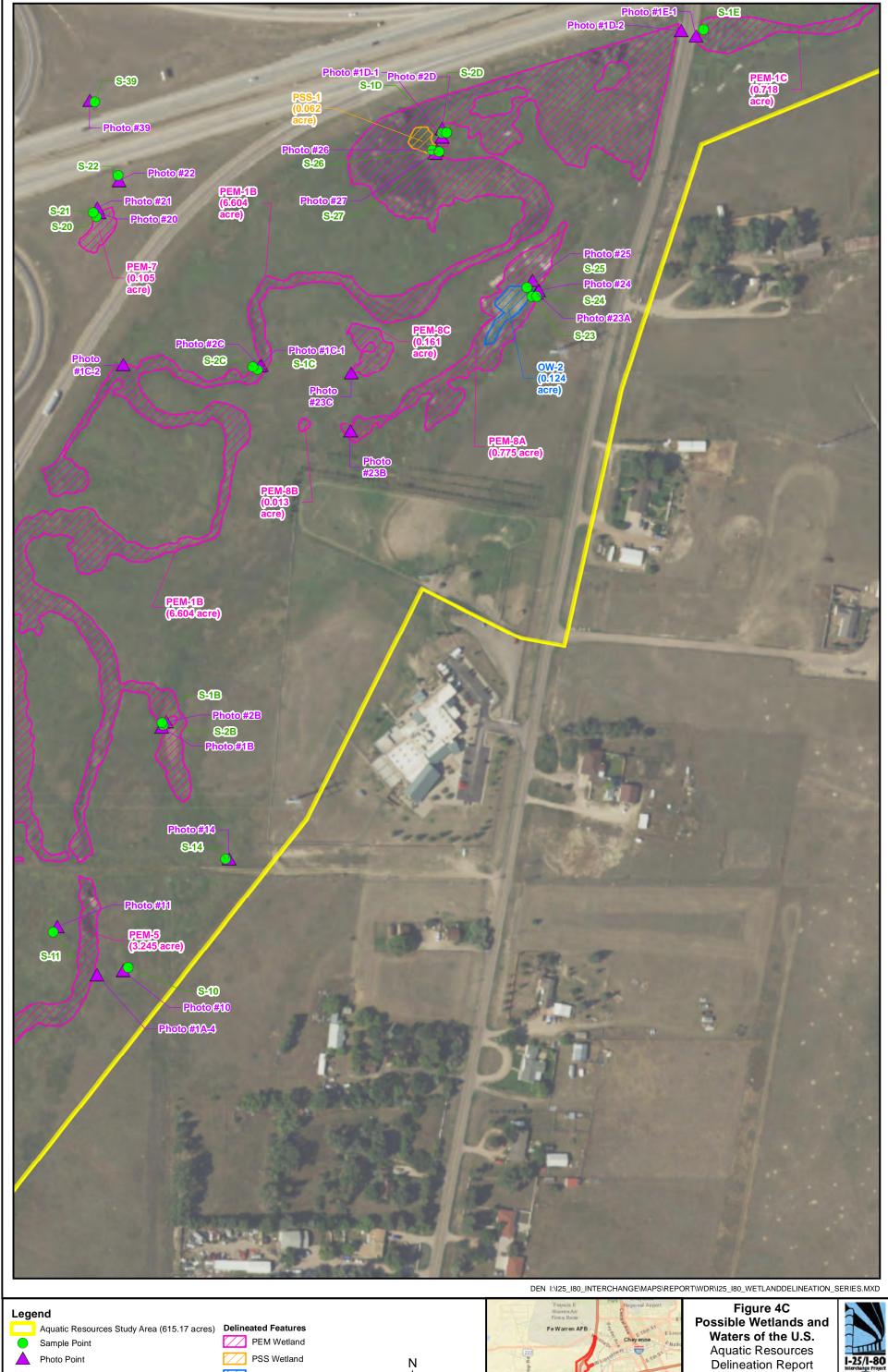
Channel Aerial Imagery: NAIP, 2018 Delineation completed on July 30 through August 1, 2019, by Rachel Newton/Jacobs and Dan Soucy/Jacobs. Prepared by Jill Rosenberger/Jacobs on November 4, 2019.

200 1 inch = 200 feet

I-25 / I-80 Interchange Laramie County, Wyoming



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Aerial Imagery: NAIP, 2018 Delineation completed on July 30 through August 1, 2019, by Rachel Newton/Jacobs and Dan Soucy/Jacobs. Prepared by Jill Rosenberger/Jacobs on November 4, 2019.

Open Water Channel

200 1 inch = 200 feet



I-25 / I-80 Interchange Laramie County, Wyoming





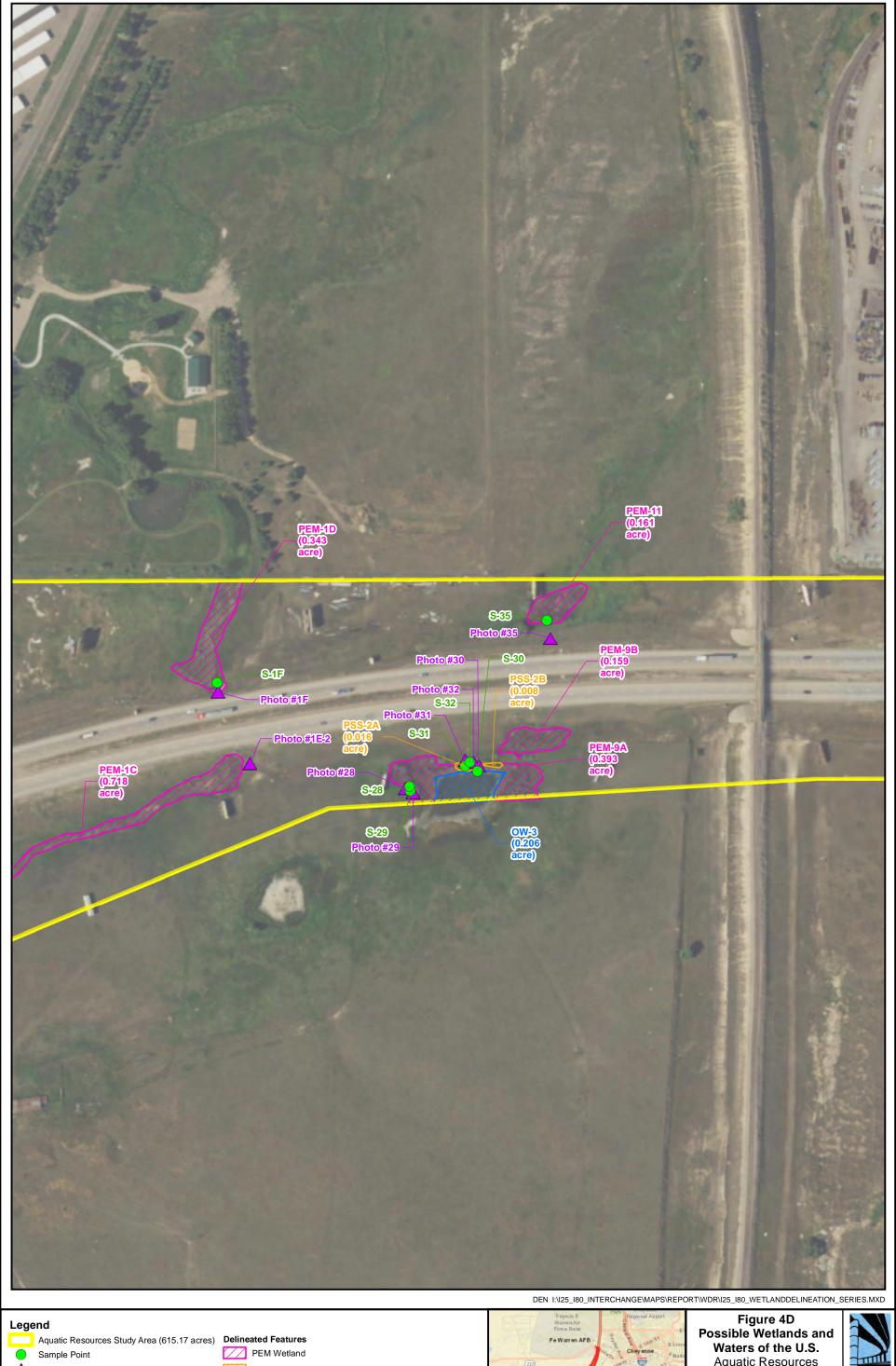
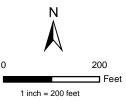


Photo Point

PSS Wetland

Open Water Channel

Aerial Imagery: NAIP, 2018
Delineation completed on July 30 through
August 1, 2019, by Rachel Newton/Jacobs and Dan Soucy/Jacobs.
Prepared by Jill Rosenberger/Jacobs on November 4, 2019.

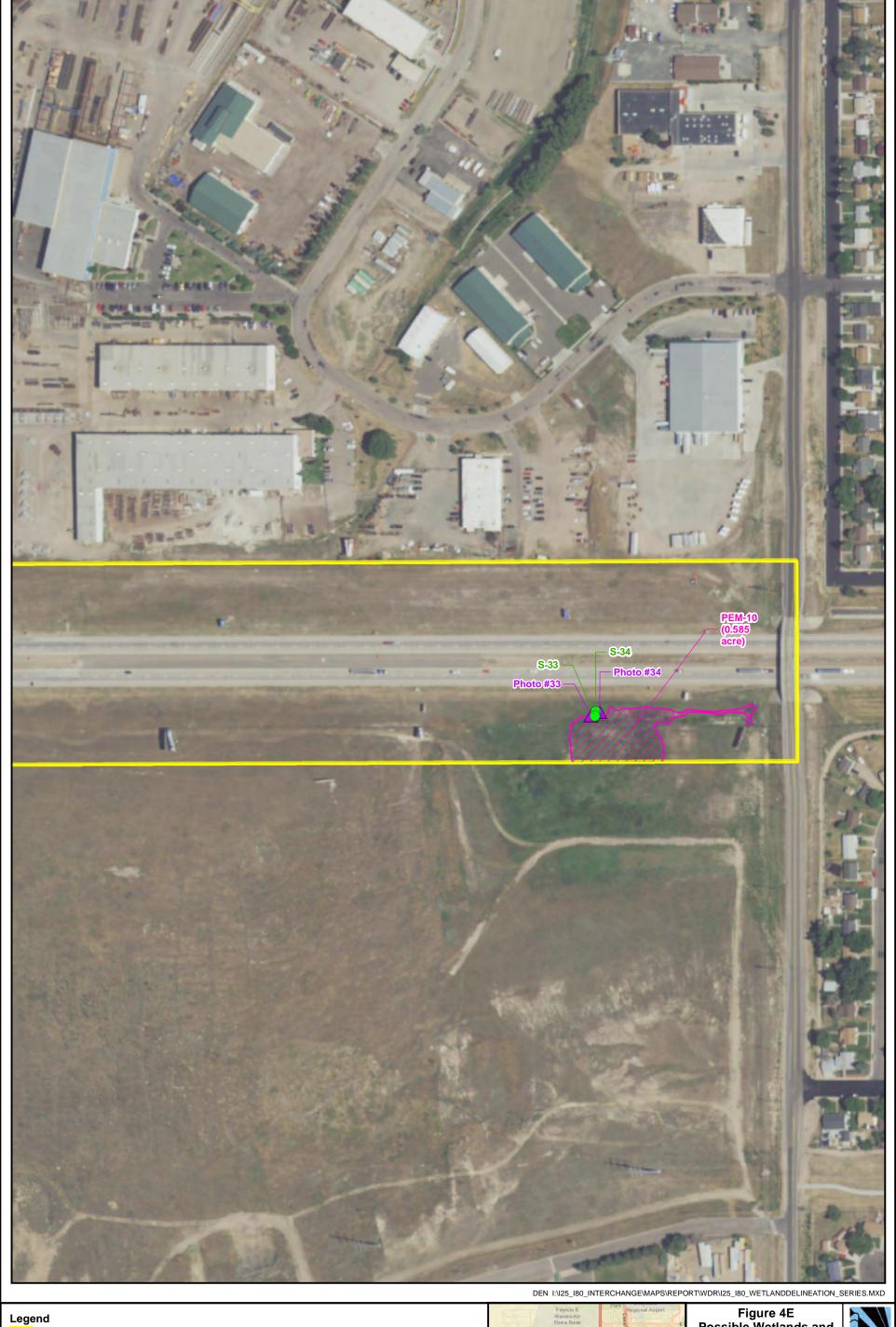




Aquatic Resources **Delineation Report** I-25 / I-80 Interchange Laramie County, Wyoming



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Sample Point A Photo Point

Aquatic Resources Study Area (615.17 acres) Delineated Features PEM Wetland

PSS Wetland Open Water Channel

Aerial Imagery: NAIP, 2018
Delineation completed on July 30 through
August 1, 2019, by Rachel Newton/Jacobs and Dan Soucy/Jacobs.
Prepared by Jill Rosenberger/Jacobs on November 4, 2019.

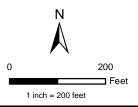




Figure 4E
Possible Wetlands and
Waters of the U.S. Aquatic Resources Delineation Report I-25 / I-80 Interchange Laramie County, Wyoming







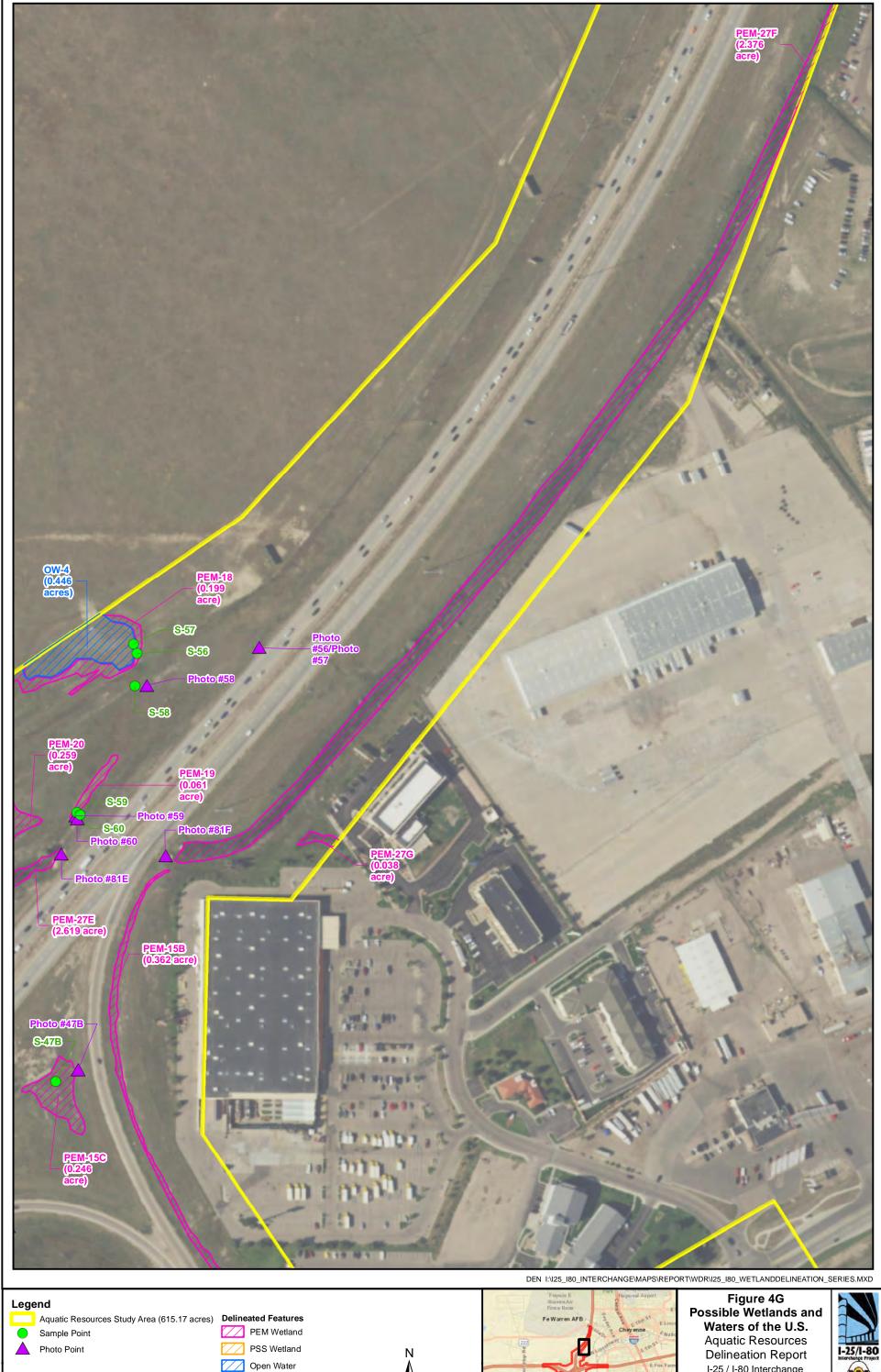
Open Water Channel Aerial Imagery: NAIP, 2018
Delineation completed on July 30 through
August 1, 2019, by Rachel Newton/Jacobs and Dan Soucy/Jacobs.
Prepared by Jill Rosenberger/Jacobs on November 4, 2019.

200 1 inch = 200 feet

Delineation Report I-25 / I-80 Interchange Laramie County, Wyoming



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Aerial Imagery: NAIP, 2018
Delineation completed on July 30 through
August 1, 2019, by Rachel Newton/Jacobs and Dan Soucy/Jacobs.
Prepared by Jill Rosenberger/Jacobs on November 4, 2019.

Channel

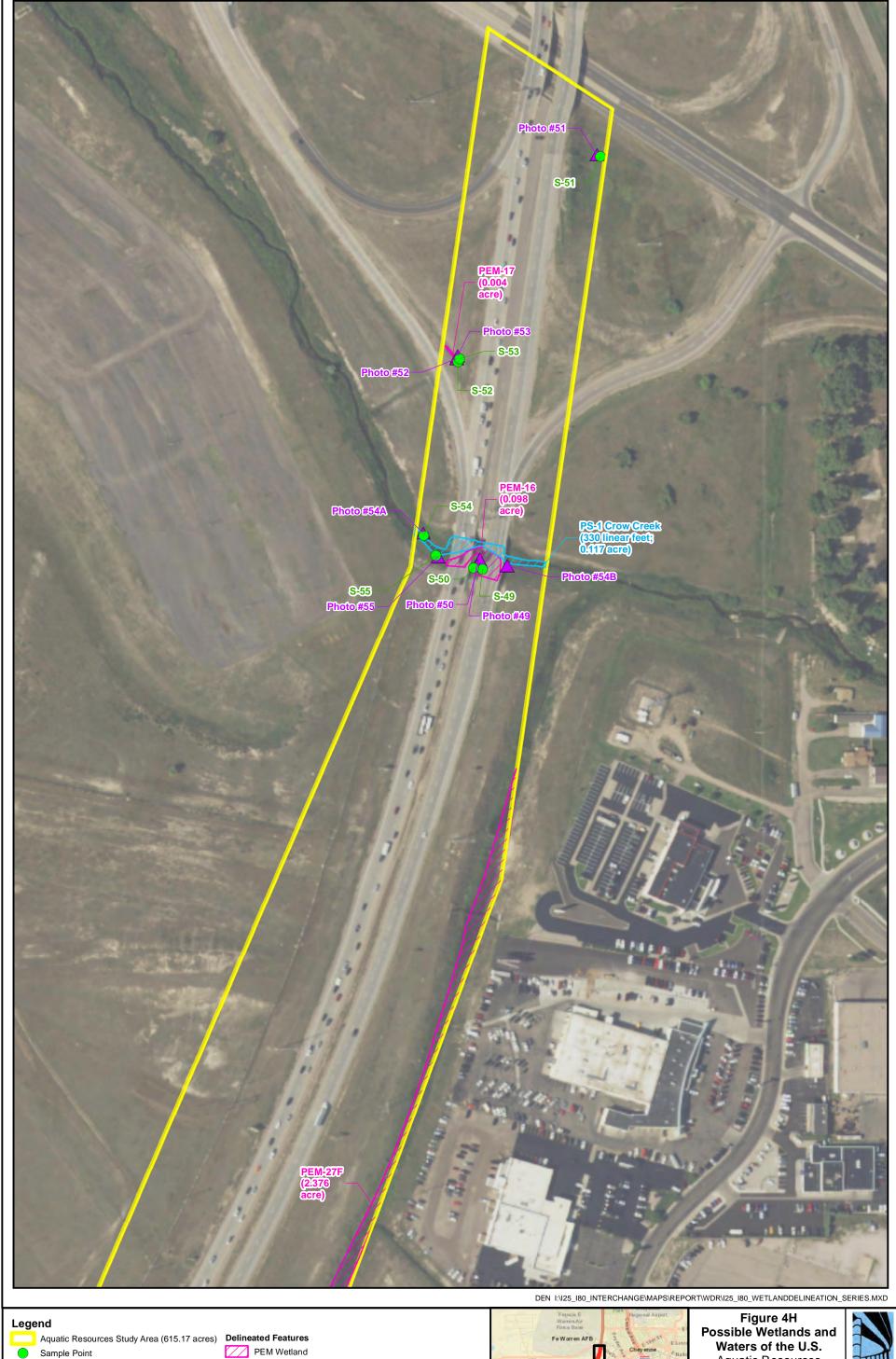
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1 inch = 200 feet

Delineation Report I-25 / I-80 Interchange Laramie County, Wyoming



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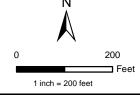


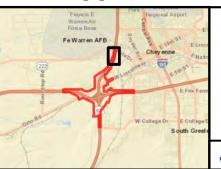
Aerial Imagery: NAIP, 2018
Delineation completed on July 30 through
August 1, 2019, by Rachel Newton/Jacobs and Dan Soucy/Jacobs.
Prepared by Jill Rosenberger/Jacobs on November 4, 2019.

A Photo Point





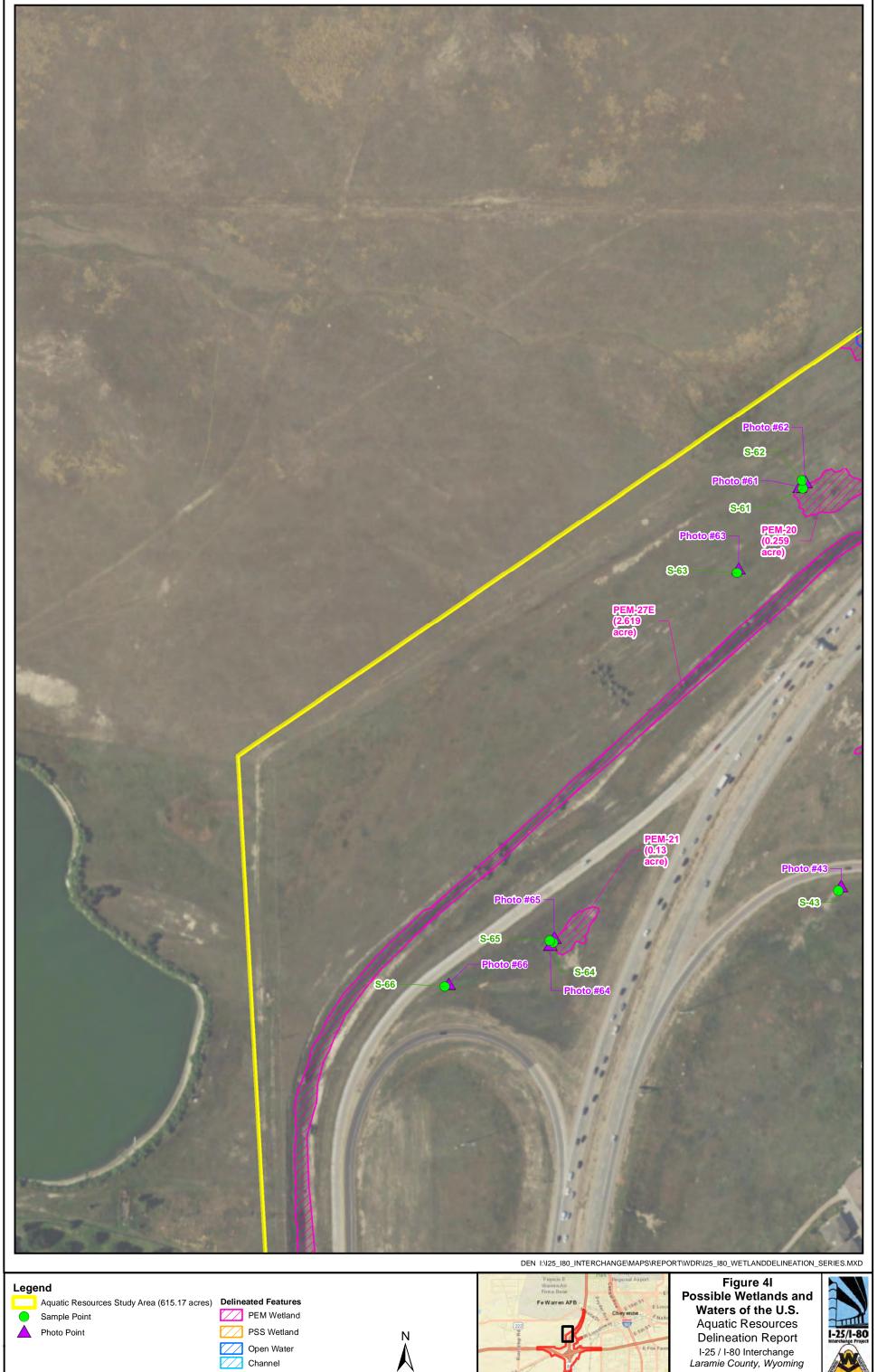




Aquatic Resources Delineation Report I-25 / I-80 Interchange Laramie County, Wyoming



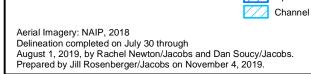


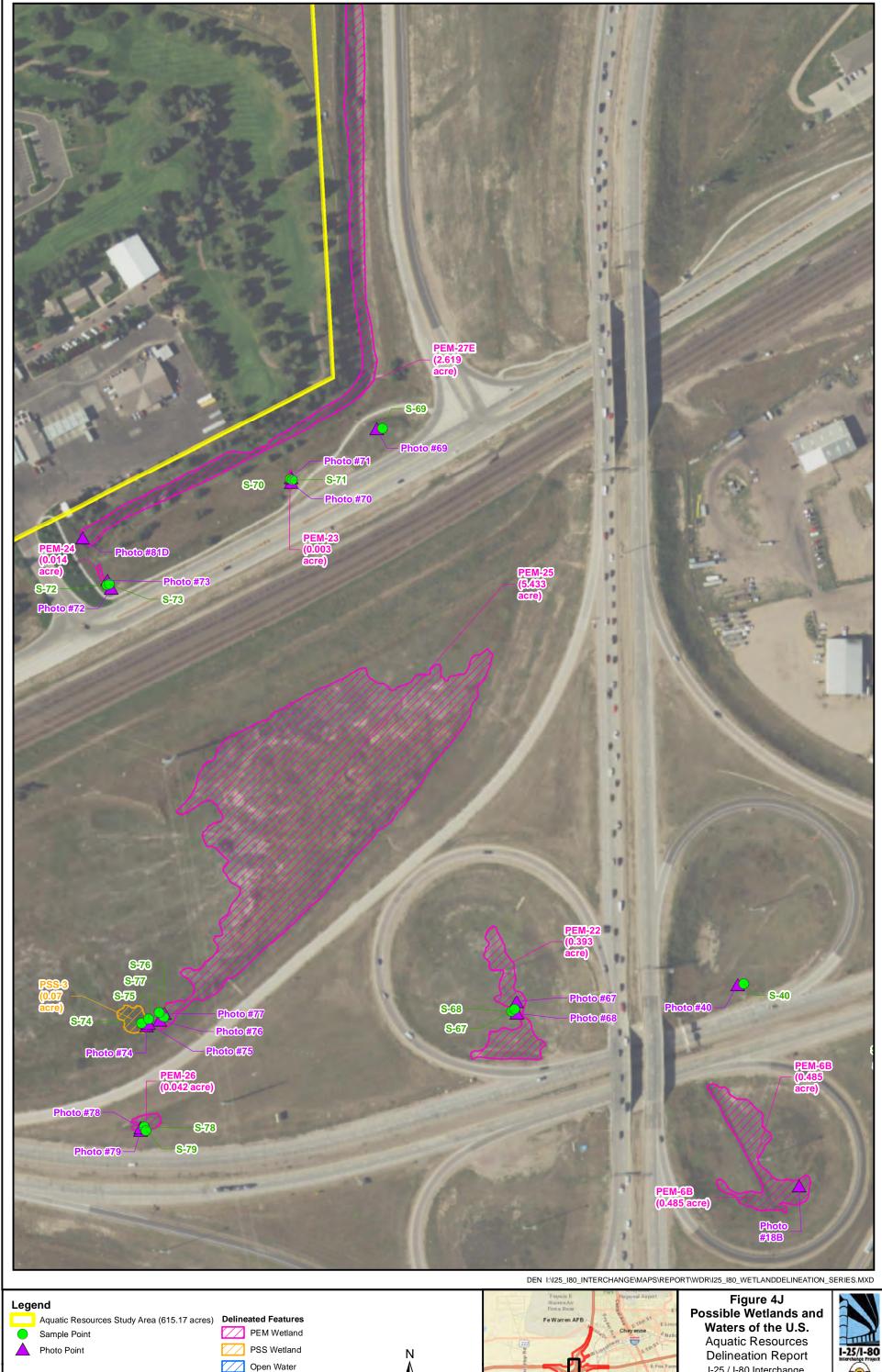


200

1 inch = 200 feet

JACOBS





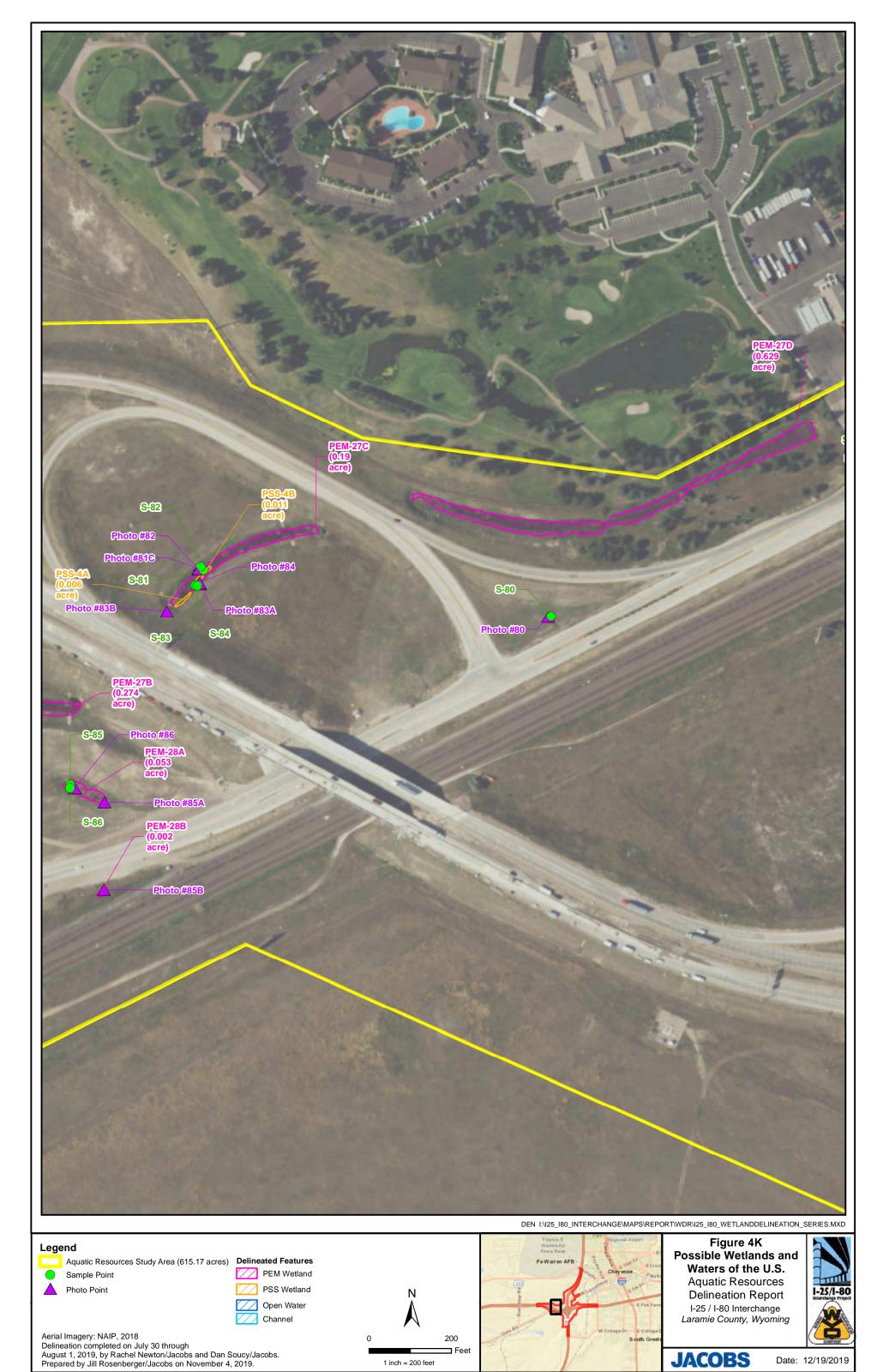
Channel Aerial Imagery: NAIP, 2018
Delineation completed on July 30 through
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200 1 inch = 200 feet

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1 inch = 200 feet

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Aerial Imagery: NAIP, 2018
Delineation completed on July 30 through
August 1, 2019, by Rachel Newton/Jacobs and Dan Soucy/Jacobs.
Prepared by Jill Rosenberger/Jacobs on November 4, 2019.

Open Water Channel

200 1 inch = 200 feet

Delineation Report I-25 / I-80 Interchange Laramie County, Wyoming





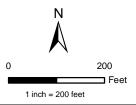


A Photo Point

PSS Wetland



Aerial Imagery: NAIP, 2018
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August 1, 2019, by Rachel Newton/Jacobs and Dan Soucy/Jacobs.
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Aquatic Resources **Delineation Report** I-25 / I-80 Interchange Laramie County, Wyoming



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Table



Table 1. Aquatic Resources Identified in the I-25/I-80 Interchange Study Area

Aquatic Resource	Sample Point	UTM (Northing/ Easting)	Flow or Wetland Classification ^a	Acreage within the Study Area	Remarks	Figure	Photos
Wetlands							
PEM-1A	1A, 1B	221517 / 742952	PEMIC	3.245	Type 3 - Inland shallow fresh marsh. Wetland includes remnant Clear Creek channel and floodplains. Dominated by Schoenoplectus pungens and S. tabernaemontani. Possibly jurisdictional - flows into Crow Creek.	4A, 4B	1A-1, 1A-2, 1A-3, 1A-4, 1B
PEM-1B	1C, 1D	223586 / 744378	PEM1C	6.604	Type 3 - Inland shallow fresh marsh. Wetland includes remnant Clear Creek channel and floodplains. Dominated by Carex utriculata, Eleocharis palustris, and Juncus balticus. Possibly jurisdictional - flows into Crow Creek.	4B, 4C, 4F	1C-1, 1C-2, 1D-1, 1D-2
PEM-1C	1E	224336 / 745598	PEM1C	0.716	Type 3 - Inland shallow fresh marsh. Wetland includes remnant Clear Creek channel and floodplains. Dominated by <i>Phalaris arundinacea</i> . Possibly jurisdictional - flows into Crow Creek.	4C, 4D, 4F	1E-1, 1E-2
PEM-1D	1F	224798 / 745994	PEM1C	0.343	Type 3 - Inland shallow fresh marsh. Wetland includes remnant Clear Creek channel and floodplains. Dominated by <i>Phalaris arundinacea</i> . Possibly jurisdictional - flows into Crow Creek.	4D	1F
PEM-2A	S-5A	221932 / 742885	PEMIC	0.05	Type 9 - Inland saline flat. Wetland in depressional area dominated by Hordeum jubatum and Eleocharis palustris. Possibly isolated.	4B	5A
PEM-2B	S-5A	221896 / 743019	PEM1C	0.174	Type 9 - Inland saline flat. Wetland in depressional area dominated by <i>Hordeum jubatum</i> . Possibly isolated.	4B	5B



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Aquatic Resource	Sample Point	UTM (Northing/ Easting)	Flow or Wetland Classification ^a	Acreage within the Study Area	Remarks	Figure	Photos
PEM-2C	S-5B	222109 / 743000	PEM1C	0.423	Type 9 - Inland saline flat. Wetland in depressional area dominated by <i>Hordeum jubatum</i> . Possibly isolated.	4B	5C
PEM-2D	S-5B	222292 / 743019	PEM1C	0.104	Type 9 - Inland saline flat. Wetland in depressional area dominated by <i>Eleocharis palustris</i> . Possibly isolated.	4B	5D
PEM-2E	S-5B	222339 / 743085	PEM1C	0.03	Type 9 - Inland saline flat. Wetland in depressional area dominated by <i>Eleocharis palustris</i> and <i>Distichlis spicata</i> . Possibly isolated.	4B	-
PEM-2F	S-5B	222373 / 743050	PEM1C	0.006	Type 9 - Inland saline flat. Wetland in depressional area dominated by <i>Eleocharis palustris</i> and <i>Distichlis spicata</i> . Possibly isolated.	4B	-
PEM-3	S-8	222603 / 742419	PEM1C	0.066	Type 9 - Inland saline flat. Wetland in depressional area dominated by <i>Eleocharis quinqueflora</i> . Possibly isolated.	4B	8
PEM-4	S-12	222285 / 743470	PEM1C	0.144	Type 9 - Inland saline flat. Dominated by <i>Juncus</i> balticus. Possibly jurisdictional: connected via overland flow to PEM-1B, which flows into Crow Creek.	4B	12
PEM-5	S-15	222598 / 743552	PEM1C	1.995	Type 9 - Inland saline flat. Dominated by <i>Distichlis</i> spicata. Possibly jurisdictional - connected via overland flow to PEM-1B, which flows into Crow Creek.	4B, 4C	15
PEM-6A	S-18	223303 / 743575	РЕМІС	0.016	Type 9 - Inland saline flat. Wetland within on/off-ramp islands. Dominated by <i>Schoenoplectus pungens</i> . Possibly isolated.	4B	18A



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Aquatic Resource	Sample Point	UTM (Northing/ Easting)	Flow or Wetland Classification ^a	Acreage within the Study Area	Remarks	Figure	Photos
PEM-6B	S-18	223589 / 743451	PEM1C	0.485	Type 9 - Inland saline flat. Wetland within on/off-ramp islands. Dominated by <i>Schoenoplectus pungens</i> . Possibly isolated.	4B, 4J	18B
PEM-7	S-20	223784 / 743822	РЕМ1С	0.105	Type 9 - Inland saline flat. Wetland within on/off-ramp island. Dominated by <i>Poa pratensis</i> . Possibly isolated.	4C	20
PEM-8A	S-23	223533 / 744671	PEM1C	0.775	Type 9 - Inland saline flat. Dominated by Schoenoplectus pungens and Distichlis spicata. Possibly jurisdictional - connected via overland flow to PEM-1B, which flows into Crow Creek.	4C	23A, 23B
PEM-8B	S-23	223346 / 744284	PEM1C	0.013	Type 9 - Inland saline flat. Dominated by Schoenoplectus pungens and Distichlis spicata. Possibly jurisdictional - connected via overland flow to PEM-1B, which flows into Crow Creek.	4C	-
РЕМ-8С	S-23	223515 / 744433	PEM1C	0.161	Type 9 - Inland saline flat. Dominated by Schoenoplectus pungens and Distichlis spicata. Possibly jurisdictional - connected via overland flow to PEM-1B, which flows into Crow Creek.	4C	23C
PSS-1	S-26	223986 / 744552	PSS1C	0.062	Type 6 - shrub swamp. Shrub wetland within PEM-1B. Dominated by Salix exigua and Juncus balticus. Possibly jurisdictional - flows into Crow Creek.	4C	26
РЕМ-9А	S-28	224488 / 746558	PEM1C	0.393	Type 2 - Inland fresh meadow. Depressional/fringe wetland surrounding stock pond. Dominated by Juncus balticus and Alopecurus pratensis. Possibly isolated.	4D	28



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Aquatic Resource	Sample Point	UTM (Northing/ Easting)	Flow or Wetland Classification ^a	Acreage within the Study Area	Remarks	Figure	Photos
РЕМ-9В	S-28	224575 / 746714	PEM1C	0.159	Type 2 - Inland fresh meadow. Depressional/fringe wetland surrounding stock pond. Dominated by Juncus balticus and Alopecurus pratensis. Possibly isolated.	4D	-
PSS-2A	S-31	224516 / 746561	PSS1C	0.016	Type 6 - shrub swamp. Fringe wetland at stock pond. Dominated by Salix melanopsis. Possibly isolated.	4D	31
PSS-2B	S-31	224520 / 746625	PSS1C	0.008	Type 6 - shrub swamp. Fringe wetland at stock pond. Dominated by Salix melanopsis. Possibly isolated.	4D	-
PEM-10	S-33	224556 / 748882	РЕМ1С	0.585	Type 2 - Inland fresh meadow. Dominated by Distichlis spicata and Elymus riparius. Possibly isolated.	4E	33
PEM-11	S-35	224878 / 746765	РЕМ1С	0.161	Type 2 - Inland fresh meadow. Dominated by Typha angustifolia. Possibly isolated.	4D	35
PEM-12	S-37	224413 / 744763	РЕМ1С	0.547	Type 2 - Inland fresh meadow. Dominated by Poa palustris and Carex praegracilis. Possibly isolated	4F	37
PEM-13	S-41	226554 / 743918	PEM1C	0.059	Type 4 - Inland deep fresh marsh. Deep depressional wetland adjacent to parking lot. Dominated by Eleocharis palustris. Possibly isolated.	4F	41
PEM-14	S-45	226704 / 744172	РЕМІС	0.301	Type 2 - Inland fresh meadow. Depressional wetland adjacent to parking lot. Dominated by Carex utriculata. Possibly isolated.	4F	45
PEM-15A	S-47A	226529 / 744470	PEM1C	0.053	Type 9 - Inland saline flat. Depressional wetland in on/off-ramp island connected via culvert. Dominated by <i>Hordeum jubatum</i> . Possibly jurisdictional - flows into PEM-27F, which flows into PS-1 Crow Creek.	4F	47A



Table 1. Aquatic Resources Identified in the I-25/I-80 Interchange Study Area

Aquatic Resource	Sample Point	UTM (Northing/ Easting)	Flow or Wetland Classification ^a	Acreage within the Study Area	Remarks	Figure	Photos
PEM-15B	S-47A	227131 / 744186	PEMIC	0.362	Type 9 - Inland saline flat. Depressional wetland in on/off-ramp island connected via culvert. Dominated by <i>Hordeum jubatum</i> . Possibly jurisdictional - flows into PEM-27F, which flows into PS-1 Crow Creek.	4F, 4G	-
PEM-15C	S-47B	227304 / 743887	PEM1C	0.246	Type 9 - Inland saline flat. Depressional wetland in on/off-ramp island connected via culvert. Dominated by <i>Hordeum jubatum</i> . Possibly jurisdictional - flows into PEM-27F, which flows into PS-1 Crow Creek.	4G	47B
PEM-16	S-49	231076 / 745826	PEM1C	0.098	Type 3 - Inland shallow fresh marsh. Depressional/ fringe wetland to Crow Creek under I-25 bridges. Dominated by <i>Phalaris arundinacea</i> . Possibly jurisdictional.	4H	49
PEM-17	S-52	231541 / 745764	PEM1C	0.004	Type 9 - Inland saline flat. Wetland in on/off-ramp island. Dominated by <i>Hordeum jubatum</i> . Possibly isolated.	4H	52
PEM-18	S-56	228280 / 743941	PEM1C	0.199	Type 2 - Inland fresh meadow. Depressional/fringe wetland around stock pond. Dominated by Alopecurus pratensis. Possibly isolated.	4G	56
PEM-19	S-59	228004 / 743965	PEM1C	0.061	Type 2 - Inland fresh meadow. Dominated by Eleocharis palustris. Possibly jurisdictional - connected via overland flow to PEM-27E, which flows into Crow Creek.	4G	59



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Aquatic Resource	Sample Point	UTM (Northing/ Easting)	Flow or Wetland Classification ^a	Acreage within the Study Area	Remarks	Figure	Photos
PEM-20	S-61	227912 / 743746	PEM1C	0.259	Type 2 - Inland fresh meadow. Dominated by Alopecurus pratensis. Possibly jurisdictional - connected via overland flow to PEM-27E, which flows into Crow Creek.	4G, 4I	61
PEM-21	S-64	226901 / 743157	PEMIC	0.13	Type 9 - Inland saline flat. Wetland in on/off-ramp island. Dominated by <i>Distichlis spicata</i> . Possibly isolated.	41	64
PEM-22	S-67	223918 / 742887	PEMIC	0.393	Type 9 - Inland saline flat. Wetland in on/off-ramp island. Dominated by <i>Distichlis spicata</i> . Possibly isolated.	4J	67
PEM-23	S-70	225126 / 742393	PEMIC	0.003	Type 2 - Inland fresh meadow. Wetland receiving road run-off from flume. Dominated by <i>Hordeum jubatum</i> . Possibly isolated.	4J	70
PEM-24	S-72	224899 / 741967	PEMIC	0.014	Type 3 - Inland shallow fresh marsh. Wetland receiving road run-off from flume. Dominated by Schoenoplectus pungens and Typha angustifolia. Possibly isolated.	4J	72
PSS-3	S-74	223899 / 742035	PSS1C	0.07	Type 6 - Shrub swamp. Wetland in on/off-ramp island. Dominated by Salix exigua. Abuts PEM-25. Possibly isolated.	4J	74
PEM-25	S-76	224400 / 742450	PEMIC	5.433	Type 3 - Inland shallow fresh marsh. Wetland in on/off-ramp island. Dominated by Juncus torreyi and Agrostis stolonifera. Abuts PSS-3. Possibly isolated.	4J	76
PEM-26	S-78	223665 / 742066	PEMIC	0.042	Type 3 - Inland shallow fresh marsh. Wetland in on/off-ramp island. Dominated by Carex aquatilis and Typha angustifolia. Possibly isolated.	4J	78



Table 1. Aquatic Resources Identified in the I-25/I-80 Interchange Study Area

Aquatic Resource	Sample Point	UTM (Northing/ Easting)	Flow or Wetland Classification ^a	Acreage within the Study Area	Remarks	Figure	Photos
PEM-27A	S-81	223916 / 739560	PEMIC	0.121	Type 4 - Inland deep fresh marsh. Wetland appears to be in remnant stream channel, connected via a series of culverts. Dominated by Typha angustifolia and Carex utriculata. Possibly jurisdictional - flows into Crow Creek.	4L	81A
PEM-27B	S-81	224214 / 739786	PEM1C	0.274	Type 4 - Inland deep fresh marsh. Wetland appears to be in remnant stream channel, connected via a series of culverts. Dominated by Typha angustifolia and Carex utriculata. Possibly jurisdictional - flows into Crow Creek.	4K, 4L	81B
PEM-27C	S-81	224596 / 740353	PEM1C	0.19	Type 4 - Inland deep fresh marsh. Wetland appears to be in remnant stream channel, connected via a series of culverts. Dominated by Typha angustifolia and Carex utriculata. Possibly jurisdictional - flows into Crow Creek.	4K	81C
PEM-27D	S-81	224740 / 741282	PEM1C	0.629	Type 4 - Inland deep fresh marsh. Wetland appears to be in remnant stream channel, connected via a series of culverts. Dominated by Typha angustifolia and Carex utriculata. Possibly jurisdictional - flows into Crow Creek.	4K	81D
PEM-27E	S-81	226436 / 742786	PEMIC	2.619	Type 4 - Inland deep fresh marsh. Wetland appears to be in remnant stream channel, connected via a series of culverts. Dominated by Typha angustifolia and Carex utriculata. Possibly jurisdictional - flows into Crow Creek.	4G, 4I, 4J	81E



Table 1. Aquatic Resources Identified in the I-25/I-80 Interchange Study Area

Aquatic Resource	Sample Point	UTM (Northing/ Easting)	Flow or Wetland Classification ^a	Acreage within the Study Area	Remarks	Figure	Photos
PEM-27F	S-81	228984 / 745127	PEMIC	2.376	Type 4 - Inland deep fresh marsh. Wetland appears to be in remnant stream channel, connected via a series of culverts. Dominated by Typha angustifolia and Carex utriculata. Possibly jurisdictional - flows into Crow Creek.	4G, 4H	81F
PEM-27G	S-81	227883 / 744479	PEM1C	0.038	Type 4 - Inland deep fresh marsh. Wetland appears to be in remnant stream channel, connected via a series of culverts. Dominated by Typha angustifolia and Carex utriculata. Possibly jurisdictional - flows into Crow Creek.	4G	-
PSS-4A	S-83	224487 / 740211	P\$\$1C	0.011	Type 6 - Shrub swamp. Shrub wetland within PEM-27C. Dominated by Salix exigua and Typha angustfolia. Possibly jurisdictional - flows into Crow Creek.	4K	83A, 83B
PSS-4B	S-83	224542 / 740254	PSS1C	0.006	Type 6 - Shrub swamp. Shrub wetland within PEM-27C. Dominated by Salix exigua and Typha angustfolia. Possibly jurisdictional - flows into Crow Creek.	4K	83A, 83B
PEM-28A	S-85	224021 / 739976	PEM1C	0.053	Type 3 - Inland shallow fresh marsh. Wetland in on/off-ramp island. Dominated by Juncus balticus. Possibly isolated.	4K	85A
PEM-28B	S-85	223771 / 740010	PEM1C	0.002	Type 3 - Inland shallow fresh marsh. Wetland connected via culvert to wetland in on/off-ramp island. Dominated by Juncus balticus. Possibly isolated.	4K	85B



Table 1. Aquatic Resources Identified in the I-25/I-80 Interchange Study Area

Aquatic Resource	Sample Point	UTM (Northing/ Easting)	Flow or Wetland Classification ^a	Acreage within the Study Area	Remarks	Figure	Photos
Natural Wat	ercourses						
PS-1	S-54	223918 / 742904	R2UBH	0.117 (330 linear feet)	OHWM width average 13 feet. Indicators: defined bed/bank, change in plant community.	4H	54A, 54B
Other Water	s						
OW-1	S-4	221660 / 742770	PUBH	0.039	Type 5 - Inland open fresh water. Open water area within PEM-1A. Possibly jurisdictional - flows into Crow Creek.	4B	4
OW-2	S-25	223609 / 744745	PUBH	0.124	Type 11 - Inland open saline water. Open water area with PEM-8A. Possibly jurisdictional - connected via overland flow to PEM-1B, which flows into Crow Creek.	4C	25
OW-3	S-30	224471 / 746566	PUBH	0.206	Type 5 - Inland open fresh water. Stock pond. Possibly isolated.	4D	30
OW-4	S-57	224071 / 743815	PUBH	0.446	Type 5 - Inland open fresh water. Stock pond. Possibly isolated.	4G	57

a Cowardin, et al. 1979

OHWM = ordinary high water mark UTM = Universal Transverse Mercator

Appendix A: USACE Wetland and Ordinary High Water Mark Datasheets

	2000		ala FOIII	ıı - Great i	Plains Regi	OII		
Project/Site: I-25/I-80 Interchange			County: Che	eyenne/Larar	nie	Sampling Date	e: 7/30/2	2019
Applicant/Owner: Wyoming Dept. of Tra	ansportatio	n			State: WY	Sampling Poin		
Investigator(s): R. Newton, D. Soucy						Township, Range:		
Landform (hillslope, terrace, etc.): Depres		Lo	•	ncave, conve	ex, none):	concave	_ Slope (%):	
Subregion (LRR): G - Western Great Pla		Lat.	2208	71.6784	Long:	742553.8031	Datum: W	
Soil Map Unit Name: Merden silty clay loam		-				VI Classification:	PEMA/PI	EMC
Are climatic/hydrologic conditions on the site	• •	•				no, explain in Rema	arks)	
Are Vegetation, Soil, or Hy	drology	significantly	disturbed? A	re "Normal C	ircumstances" ¡	oresent? Yes	<u>X</u>	No
Are Vegetation, Soil, or Hy	drology	naturally pro	blematic?		(If needed, ex	plain any answers i	n Remarks.)	
SUMMARY OF FINDINGS - Attach site ma	p showing s	ampling point	locations, t	ransects, im	portant feature	es, etc.		
Hydrophytic Vegetation Present? Yes _	X No							
Hydric Soil Present? Yes	X No		Is the Sa	mpled Area w	rithin a Wetland	? Ye	s X No	
Wetland Hydrology Present? Yes	X No							
Remarks: NWI-mapped depressional palustrine emerge	ent wetland F	PEM-1A. Area a	ılso includes	NHD-mappe	d Clear Creek,	but no channel featu	ures are presei	nt.
VEGETATION - Use scientific names of pl	ants.							
	Absolute	Dominant	Indicator		e Test Worksh			
<u>Tree Stratum</u> (Plot size: 30x30 ft)	% Cover	Species?	Status		Dominant Spec			
1				(excluding	BL, FACW, or I FAC-)	-AC: -	2	(A)
2								
3					per of Dominant		2	(D)
4				Species Ad	ross All Strata:	-	2	_ (B)
5.	0	= Total Cover						
Sapling/Shrub Stratum (Plot size: 15x	15 ft)	- Total Cover			Dominant Spec BL, FACW, or I		100%	(A /D)
	1511)			That Ale O	DL, FACVV, OF	-AC.	100%	(A/B)
1. 2.				Prevalence	e Index Works	heet:		
3.					otal % Cover o		Multiply b	ov:
4.				-	ecies		1 = 73	
5.					ecies		2 = 54	
	0	= Total Cover		· ·	ecies	0 x	3 = 0	
Herb Stratum (Plot size: 5x5 ft)					ecies	0 x	4 = 0	_
1. Schoenoplectus tabernaemontani	25	Υ	OBL	UPL sp	ecies	0 x	5 = 0	
2. Schoenoplectus pungens	48	Y	OBL	Column To	tals:	100 (A) 127	7 (B)
3. Mentha arvensis	15	N	FACW		Prevale	ence Index = B/A =	1.3	
4. Calamagrostis stricta	12	N	FACW	Hydrophyt	ic Vegetation	ndicators:		
5.				>	1. Rapid Tes	st for Hydrophytic Ve	egetation	
6.				>	2. Dominano	e Test is >50%.		
7.				>	3. Prevalenc	e Index is <3.01		
8.						gical Adaptations¹ (F		
9.					porting data	in Remarks or on a	separate shee	et)
10					Problematic	Hydrophytic Vegeta	ition (Explain)	
	100	= Total Cover						
Woody Vine Stratum (Plot size: 30x30	ft)							
1				¹ In	dicators of hydri	c soil and wetland hyd	Irology must be	:
2.				pre	esent, unless dist	urbed or problematic		
	_	= Total Cove	er					
% Bare Ground in Herb Stratum (0	- Total Cove	•	Ну	drophytic Veget	ation Present?	X_Yes	No
% Bare Ground in Herb Stratum (- Total Gove		Ну	drophytic Veget	ation Present?	X_Yes	No

SOIL Sampling Point: S-1A

	•	to the dep	th needed to do			r or confirm the abser	nce of indicators.)		
Depth (inches)	Matrix		0.1.7.10		ox Feature		Tautuus	_	
	Color (moist)	<u>%</u>	Color (moist)	%	Тур	e ¹ Loc ²	Texture	Remar	KS
0-1	10 YR 3/1	100					muck		
1-3	10 YR 2/1	100					Sandy Loam	fine roots throughout	
3-7	10 YR 2/1	100					organic - peat	fine roots throughout	
7-18	10 YR 3/1	100					Sandy Clay Loan	fine roots throughout	
¹ Type: C=Co	oncentration, D=De	epletion, R	M=Reduced Mat	rix, CS=0	Covered or	Coated Sand Grains	. ² Location: PL=	Pore Lining, M=Matrix	
Hydric Soil	Indicators						Indicato	ors for Problematic Hydri	c Soils ³ :
Histos	sol (A1)			Sa	andy Gleye	ed Matrix (S4)	1	cm Muck (A9) (LRR I, J)	
Histic	Epipedon (A2)			S	andy Redo	x (S5)		Coast Prairie Redox (A16)	(LRR F, G, H)
Black	Histic (A3)			St	tripped Ma	trix (S6)		ark Surface (S7) (LRR G)	
Hydro	gen Sulfide (A4)			Lo	oamy Muck	xy Mineral (F1)		ligh Plains Depressions (F	16)
Stratif	ied Layers (A5) (Ll	RR F)		Lo	oamy Gley	ed Matrix (F2)		(LRR H outside of MLRA	72 & 73)
X 1 cm l	Muck (A9) (LRR F,	G , H)		D	epleted Ma	ntrix (F3)	R	educed Vertic (F18)	
Deple	ted Below Dark Su	rface (A11)	R	edox Dark	Surface (F6)	R	ed Parent Material (TF2)	
Thick	Dark Surface (A12	·)		D	epleted Da	rk Surface (F7)	 _	Other (Explain in Remarks)
Sandy	Mucky Mineral (S	1)		R	edox Depre	essions (F8)	3Indicate	ors of hydrophylic vegeta	tion and wetland
	n Mucky Peat or Pe	•	RR G, H)			Depressions (F16)		gy must be present, unles	
	Mucky Peat or Pea				_	k 73 of LRR H)	problem	natic.	
Restrictive I	Layer: (if observed	<i>(</i>)							
Type:	Layer: (# 0500/700	'/							
Depth (in	ches) ·						Hydric Soi	il Present? Yes X	No
							Tiyane do	11110301111 1e3 <u>7</u>	
Remarks:									
HYDROLOG	iΥ								
Wetland Hyd	drology Indicators	s:							
Primary Indic	cators (minimum of	one is req	uired; check all	that apply	y)	\$	Secondary Indicator	rs (minimum of two req	uired)
Surfac	ce Water (A1)			Salt Cr	ust (B11)			Surface Soil Cracks (B6)
High V	Water Table (A2)			Aquatio	Fauna (B	13)		Sparsley Vegetated Conca	ve Surf. (B8)
Satura	ation (A3)			Hydrog	en Sulfide	Odor (C1)		_ Drainage Patterns (B	10)
Water	Marks (B1)			Dry-Se	ason Wate	er Table (C2)		Oxidized Rhizosphere	•
Sedim	ent Deposits (B2)			Oxidized	d Rhizosphe	res on Living Roots (C3)		Roots (C3) (where til	ilea)
Drift D	eposits (B3)			(where	not tilled)		Crayfish Burrows (C8)
X Algal I	Mat or Crust (B4)			Presen	ce of Redu	iced Iron (C4)		Saturation Visible on Ae	rial Imagery (C9)
Iron D	eposits (B5)		X	Thin M	uck Surfac	e (C7)	X	Geomorphic Position	(D2)
Inunda	ation Visible on Ae	rial Imager	y (B7)	Other (Explain in	Remarks)	X	= FAC-Neutral Test (D5	5)
Water	-Stained Leaves (F	39)	· · · · · · · · · · · · · · · ·	-		•		Frost-Heave Hummocks	(D7) (LRR F)
Field Observ	vations:							_	
Surface Wat			Yes		No X	Depth (inches)		Wetland H	udrology
						•		_ Wetland H Prese	
Water Table Saturation P	resent? resent? <i>(includes d</i>	apillarv fri	Yes nge) Yes		No X No	Depth (inches) Depth (inches)	surface	_ X Yes	No
Cataration	reserve (moraces e	apmary mi		<u>^ </u>		· Bopar (<i>monos</i>)			
Remarks:									

Wetland	Determinati	on Data For	m - Great Plains	Region	
Project/Site: I-25/I-80 Interchange		City/County: C	heyenne/Laramie	Sampling D	ate: 7/30/2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation	_	State	e: WY Sampling Po	oint: S-2A
Investigator(s): R. Newton, D. Soucy				ection, Township, Range	e: S11 T13N R67W
Landform (hillslope, terrace, etc.): Terrace	e	Local Relief	concave, convex, none	e): convex	Slope (%): 0-1
Subregion (LRR): G - Western Great Pla	ains	– Lat. 22	1286.4087 Lo	ong: 742960.468	Datum: WY E
Soil Map Unit Name: Merden silty clay loam	, 0 to 3 percent slo	pes		NWI Classification:	UPL
Are climatic/hydrologic conditions on the site			es X No	 (If no, explain in Re	marks)
Are Vegetation , Soil , or Hy	•	•	? Are "Normal Circumst	 `	X No
<u> </u>		-			
Are Vegetation , Soil , or Hy		urally problematic?		ed, explain any answers	III Remarks.)
SUMMARY OF FINDINGS - Attach site map		ig point locations	, transects, important	teatures, etc.	
Hydrophytic Vegetation Present? Yes	No_X	L. Alexandr	O	M-4110	V N. V
Hydric Soil Present? Yes	No_X	is the	Sampled Area within a \	Wetland?	Yes No X
Wetland Hydrology Present? Yes	No_X_				
Remarks:					
Paired upland point for PEM-1A, Sample Poir	nt 1A.				
VEGETATION - Use scientific names of pla	ints.				
The a Charles (District		minant Indicator	Dominance Test W		
<u>Tree Stratum</u> (Plot size: 30x30 ft)	% Cover Spe	ecies? Status	Number of Dominar	•	•
1			That Are OBL, FAC (excluding FAC-):	VV, or FAC:	0 (A)
2.			-		
3.			_ Total Number of Do		4 (-)
4			Species Across All	Strata:	1 (B)
5			_		
<u> </u>		l Cover	Percent of Dominar	•	
Sapling/Shrub Stratum (Plot size: 15x	15 <u>ft</u>)		That Are OBL, FAC	CW, or FAC:	(A/B)
1			-		
2			Prevalence Index		
3			Total % C		Multiply by:
4			OBL species	0	<u>x</u> 1 = <u>0</u>
5.			FACW species	15	x 2 = 30
	0 = Tota	l Cover	FAC species	0	x 3 = 0
Herb Stratum (Plot size: 5x5 ft)			FACU species	27	x 4 = 108
Euphorbia esula		Y NI	UPL species	-	x 5 = 275
2. Juncus balticus		N FACW	Column Totals:	97	(A) 413 (B)
3. Mentha arvensis	5	N FACW	-	Prevalence Index = B/A	= 4.3
4. Cirsium arvense		N FACU	Hydrophytic Veget		
5. Elymus repens	12	N FACU	-	pid Test for Hydrophytic	Vegetation
6			-	minance Test is >50%.	
7				evalence Index is <3.01	
8				orphological Adaptations	
9			-	ng data in Remarks or or	
0			- Probl	ematic Hydrophytic Veg	etation (Explain)
		l Cover			
Woody Vine Stratum (Plot size: 30x30	<u>ft</u>)				
1				of hydric soil and wetland I	
2			present, un	less disturbed or problema	tic.
<u> </u>		otal Cover			
% Bare Ground in Herb Stratum	3 %		Hydrophyti	c Vegetation Present?	Yes X No
Remarks:					
Species with no indicator (NI) are treated as l	JPL for this analysi	s.			

SOIL Sampling Point: S-2A

Depth	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10 YR 3/2	100					Sandy Clay	
6-18	10 YR 4/4	100					Sand	50% gravel
¹ Type: C=Co	oncentration, D=Dep	oletion. RM=	Reduced Matrix	CS=Cover	ed or Coa	ated Sand Grains	² Location: PL	.=Pore Lining, M=Matrix
Hydric Soil				,				tors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandv	Gleved N	Matrix (S4)	marca	1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		-		Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	K Histic (A3)		-		ed Matrix	,		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)		-			lineral (F1)		High Plains Depressions (F16)
	ified Layers (A5) (LF	2R F)	-		•	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F ,	,	-		ted Matrix			Reduced Vertic (F18)
	eted Below Dark Sui		-		Dark Sur	` '		Red Parent Material (TF2)
	Dark Surface (A12		-			Surface (F7)		Other (Explain in Remarks)
	ly Mucky Mineral (S	•	-		Depressi	` '	3	•
		')				ressions (F16)		ators of hydrophylic vegetation and nd hydrology must be present, unless
		at (S2) (I RI	RG H)					
2.5 c	m Mucky Peat or Pe							bed or problematic.
2.5 cm	m Mucky Peat or Pea Mucky Peat or Pea	t (S3) (LRR			RA 72 & 73			· · · · · · · · · · · · · · · · · ·
2.5 cm	m Mucky Peat or Pe	t (S3) (LRR						· · · · · · · · · · · · · · · · · ·
2.5 cm 5 cm Restrictive I	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR						· · · · · · · · · · · · · · · · · ·
2.5 cm 5 cm	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR					distur	· · · · · · · · · · · · · · · · · ·
2.5 cm 5 cm Restrictive I Type: Depth (inc	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR					distur	bed or problematic.
2.5 cm 5 cm Restrictive I Type: Depth (inc	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR					distur	bed or problematic.
2.5 cm 5 cm Restrictive I Type: Depth (inco	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR					distur	bed or problematic.
2.5 cm 5 cm Type: Depth (inc.) Remarks:	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches):	t (S3) (LRR					distur	bed or problematic.
2.5 cm 5 cm Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches):	t (S3) (LRR	F)	(MLF		of LRR H)	distur	oil Present? Yes No
2.5 cm 5 cm Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): GY drology Indicators: cators (minimum of cators)	t (S3) (LRR	ed; check all tha	(MLF	RA 72 & 73	of LRR H)	distur	oil Present? Yes No X
2.5 cm 5 cm 7 per Type: Depth (incomplete in the complete in t	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): GY drology Indicators: cators (minimum of o	t (S3) (LRR	red; check all tha	t apply)	B11)	of LRR H)	distur	oil Present? Yes No >
2.5 cm 5 cm Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of of once Water (A1) Water Table (A2)	t (S3) (LRR	red; check all tha	<i>t apply)</i> Salt Crust (Aquatic Fau	B11) una (B13)	of LRR H)	distur	oil Present? Yes No >
2.5 cm 5 cm Type: Depth (incomplete in the complete in the com	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) Ches): drology Indicators: Cators (minimum of cators (minimum of cators (Manimum of Cat	t (S3) (LRR	red; check all tha	<i>t apply)</i> Salt Crust (Aquatic Fau	B11) una (B13)	of LRR H) S or (C1)	distur	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
2.5 cm 5 cm 7 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): GY drology Indicators: cators (minimum of of observed) water (A1) Water Table (A2) ration (A3) er Marks (B1)	t (S3) (LRR	red; check all tha	t apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor	B11) una (B13) Sulfide Od	of LRR H) Sor (C1) able (C2)	Hydric S econdary Indicat	oil Present? Yes No >
2.5 cm 5 cm 7 cm Restrictive I Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): GY drology Indicators: cators (minimum of of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2)	t (S3) (LRR	red; check all tha	(MLF (MLF (MLF) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Oxidized Rhiz	B11) una (B13) Sulfide Od Water Ta	of LRR H) S or (C1)	Hydric S econdary Indicat	cors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
2.5 cm 5 cm 7 ype: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of of cace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3)	t (S3) (LRR	ed; check all tha	t apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Oxidized Rhiz	B11) una (B13) Gulfide Od n Water Ta	of LRR H) Sor (C1) able (C2) on Living Roots (C3)	Hydric S econdary Indicat	oil Present? Yes No X oil Present? Yes No X cors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
2.5 cm 5 cm Type: Depth (incomplete limits) Primary Indicomplete limits Surfation High Satur Wate Sedir Drift I Algal	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): gradient	t (S3) (LRR	red; check all tha	t apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Oxidized Rhiz (where not	B11) una (B13) Sulfide Od n Water Ta zospheres o tilled) f Reduced	of LRR H) Sor (C1) able (C2) on Living Roots (C3)	Hydric S econdary Indicat	oil Present? Yes No A cors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
2.5 cm 5 cm 7 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	t (S3) (LRR	ed; check all tha	(MLF (MLF Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence o	B11) una (B13) Sulfide Od n Water Ta zospheres of tilled) f Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric S econdary Indicat	oil Present? Yes No X tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2)
2.5 cm 5 cm 7 ype: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of cace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer	t (S3) (LRR	ed; check all tha	t apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Oxidized Rhiz (where not	B11) una (B13) Sulfide Od n Water Ta zospheres of tilled) f Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric S econdary Indicat	oil Present? Yes No A oil Present? Yes No A cors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm Restrictive I Type: Depth (ince Remarks: HYDROLOG Wetland Hyd Primary Indice Surfa High Satur Wate Sedir Drift I Algal Iron I Inunce	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	t (S3) (LRR	ed; check all tha	(MLF (MLF Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence o	B11) una (B13) Sulfide Od n Water Ta zospheres of tilled) f Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric S econdary Indicat	oil Present? Yes No X tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2)
2.5 cm 5 cm 7 cm Restrictive I Type: Depth (ince Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of cace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer er-Stained Leaves (E	t (S3) (LRR	ed; check all tha	(MLF (MLF Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence o	B11) una (B13) Sulfide Od n Water Ta zospheres of tilled) f Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric S econdary Indicat	oil Present? Yes No A oil Present? Yes No A cors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm 7 ype: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): gy drology Indicators: cators (minimum of observed) water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer er-Stained Leaves (E	t (S3) (LRR	ed; check all tha	(MLF (MLF Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence o	B11) una (B13) Sulfide Od to Water Ta zospheres o tilled) f Reduced Surface (Cain in Rer	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric S econdary Indicat	oil Present? Yes No A fors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
2.5 cm 5 cm 7 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate Field Observ Surface Wate Water Table	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of of observed) water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer er-Stained Leaves (E vations: er Present?	t (S3) (LRR	red; check all that the test of the test o	(MLF (MLF dapply) Salt Crust (Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence o Thin Muck S Other (Expl	B11) Juna (B13) Sulfide Od Water Ta zospheres of tilled) f Reduced Surface (Cain in Rer	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) narks)	Hydric S econdary Indicat	oil Present? Yes No A fors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Dete	ermination Da	ata Form	- Grea	t Plains Reg	jion		
Project/Site: I-25/I-80 Interchange	City	/County: Che	yenne/Lai	amie	Sampling [Date: 7	7/31/2019
Applicant/Owner: Wyoming Dept. of Transpo	rtation		-	State: WY	Sampling F	oint:	S-1B
Investigator(s): R. Newton, D. Soucy				Section	– n, Township, Rang	e: S12 T13	N R67W
Landform (hillslope, terrace, etc.): depression/s	wale Lo	cal Relief (co	ncave, col	nvex, none):	minor concave	Slope	e (%): 0-2
Subregion (LRR): G - Western Great Plains	Lat	. 2247	01.4371	Long:	746009.0014	Dat	tum: WYE
Soil Map Unit Name: Merden silty clay loam, 0 to 3	3 percent slopes				NWI Classification:	PEN	MA/PEMC
Are climatic/hydrologic conditions on the site typical	for this time of year'	? Yes	Х	No (If no, explain in Re	emarks)	
Are Vegetation , Soil , or Hydrolog	y significantly	disturbed? A	re "Norma	Circumstances	s" present? Yes		X No
Are Vegetation , Soil , or Hydrolog					xplain any answers	- s in Remark	(s)
SUMMARY OF FINDINGS - Attach site map show			ancoete i	•		, iii i (ciiiai)	13.)
-		iocations, ti	ansects, i	inportant leatu	ires, etc.		
	No	0			10	., .,	
l ' —	No	is the Sa	mpled Area	a within a Wetla	ind?	Yes X	No
Wetland Hydrology Present? Yes X	No						
Remarks:							
Additional sample point for NWI-mapped depression channel features are present.	nal palustrine emerge	ent wetland Pl	EM-1A. Ar	ea also includes	s NHD-mapped Cle	∍ar Creek, b	out no
VEGETATION - Use scientific names of plants.							
	olute Dominant	Indicator		ce Test Works			
Tree Stratum (Plot size: 30x30 ft) % C	Cover Species?	Status		of Dominant Spe			
<u> </u>			(excludin	OBL, FACW, oi g <i>FAC-</i>)	r FAC:	1	(A)
^{2.}			(0)(0)(0)	<i>,,,,</i> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
3				nber of Domina		4	(5)
4			Species /	Across All Strata	a:	1	(B)
5	O Total Cavar						
	0 = Total Cover			f Dominant Spe			
Sapling/Shrub Stratum (Plot size: 15x15 ft	_)		That Are	OBL, FACW, or	r FAC:	100	(A/B)
1							
2				ce Index Work			
3			-	Total % Cover			tiply by:
4				species		<u>x</u> 1=	88
5				species	5	<u>x</u> 2 =	10
	0 = Total Cover			species	0	<u>x</u> 3 =	0
Herb Stratum (Plot size: 5x5 ft)	20 V	ODI		species	4	<u>x</u> 4 =	16
	38 Y	OBL		species	0	<u>x</u> 5=	0
	4 N	FACU	Column 7		97	(A)	114 (B)
	5 N	FACW			alence Index = B/A	= 1	1.2
4			Hyaropn	ytic Vegetation			
5			-		est for Hydrophytic	vegetation	1
6.			_		nce Test is >50%. nce Index is <3.01		
7			_		ogical Adaptations	ol (Provide s	eun_
8			_		a in Remarks or o		
9							•
10.	97 = Total Cover		_	Probleman	ic Hydrophytic Veg	etation (Ex	piairi)
	- Total Cover						
Woody Vine Stratum (Plot size: 30x30 ft)							
1					lric soil and wetland		nust be
2				resent, unless di	isturbed or problema	atic.	
	0 = Total Cov	er					· ·
% Bare Ground in Herb Stratum 3	_%			ydrophytic Vege	etation Present?	<u> </u>	Yes No
Remarks:							

S-1B

Sampling Point:

Profile Desc	ription: (Describe t	o the depti	h needed to docu	ment the in	ndicator or	confirm the absen	ce of indicators.)	
Depth	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10 YR 3/2	100		'			sandy clay	
3-7	10 YR 5/2	97	7.5 YR 4/4	3	С	PL	sandy clay	
7-10	10 YR 2/2	100					sandy clay	
10-15	10 YR 4/2	100					sandy clay	
¹Type: C=Co	ncentration, D=Dep	oletion, RM	l=Reduced Matrix	, CS=Cove	ered or Coa	ated Sand Grains.	² Location: PL=F	Pore Lining, M=Matrix
Hydric Soil I	ndicators						Indicato	rs for Problematic Hydric Soils ³ :
Histos	sol (A1)			Sand	ly Gleyed N	//atrix (S4)	1	cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)				ly Redox (S		C	past Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)			Strip	ped Matrix	(S6)	D:	ark Surface (S7) (LRR G)
——— Hydro	gen Sulfide (A4)					/lineral (F1)	——— Hi	gh Plains Depressions (F16)
Stratif	ied Layers (A5) (LF	RR F)		Loam	ny Gleyed I	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F,	G , H)			eted Matrix		Re	educed Vertic (F18)
X Deple	ted Below Dark Sur	face (A11))	Redo	x Dark Sui	face (F6)	Re	ed Parent Material (TF2)
	Dark Surface (A12)			 Deple	eted Dark S	Surface (F7)		ther (Explain in Remarks)
Sandy	/ Mucky Mineral (S	1)		Redo	x Depress	ions (F8)	3Indicato	rs of hydrophylic vegetation and
2.5 cm	n Mucky Peat or Pe	eat (S2) (LI	RR G, H)	—— High	Plains Dep	pressions (F16)		hydrology must be present, unless
5 cm	Mucky Peat or Peat	t (S3) (LRF	R F)	(MI	LRA 72 & 73	of LRR H)	disturbe	d or problematic.
Postrictivo I	ayer: (if observed)		-					
_	ayer. (II observed)							
Type: Depth (incl	has):						Hydria Sail	Propert? Ves V Ne
							Hydric Soil	Present? Yes X No
Remarks:								
HYDROLOG	Y							
	rology Indicators:							
Primary Indic	ators (minimum of d	one is requ	ired; check all the	at apply)		S	econdary Indicator	s (minimum of two required)
Surfac	ce Water (A1)			Salt Crust	(B11)			Surface Soil Cracks (B6)
High \	Nater Table (A2)			Aquatic Fa	auna (B13)			Sparsley Vegetated Concave Surf. (B8)
Satura	ation (A3)			Hydrogen	Sulfide Od	or (C1)		Drainage Patterns (B10)
Water	Marks (B1)			Dry-Seaso	on Water Ta	able (C2)		Oxidized Rhizospheres on Living
Sedim	nent Deposits (B2)		X	Oxidized Rh	nizospheres	on Living Roots (C3)		Roots (C3) (where tilled)
Drift D	Deposits (B3)			(where no	t tilled)			Crayfish Burrows (C8)
Algal	Mat or Crust (B4)			Presence	of Reduce	d Iron (C4)		Saturation Visible on Aerial Imagery (C9)
Iron D	eposits (B5)			Thin Muck	Surface (0	C7)	X	Geomorphic Position (D2)
Inund	ation Visible on Aer	ial Imager	y (B7)	Other (Exp	olain in Rer	marks)	X	FAC-Neutral Test (D5)
Water	-Stained Leaves (B	39)						Frost-Heave Hummocks (D7) (LRR F)
Field Observ	rations:							
Surface Wate	er Present?		Yes	N	lo X	Depth (inches)		Wetland Hydrology
Water Table I	Present?		Yes		10 X	Depth (inches)		Present?
Saturation Pr	esent? (includes ca	pillary fring	ge) Yes	X N	1o	Depth (inches)	surface	X Yes No
Remarks:				<u> </u>				
. tomarks.								

Wetland	Determination	Data Forr	n - Great Plains Re	gion	
Project/Site: I-25/I-80 Interchange		City/County: Ch	eyenne/Laramie	Sampling Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Tra	ansportation		State: W	Y Sampling Point:	S-2B
Investigator(s): R. Newton, D. Soucy			Secti	on, Township, Range: S1	1 T13N R67W
Landform (hillslope, terrace, etc.): minor t	terrace	Local Relief (c	oncave, convex, none):	minor concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Pla	ins	Lat. 2210	629.7977 Long:	742842.2627	Datum: WY E
Soil Map Unit Name: Merden silty clay loam	, 0 to 3 percent slopes	<u> </u>		NWI Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for this time of	year? Ye	s X No	(If no, explain in Remark	s)
Are Vegetation , Soil , or Hy	drology signific	antly disturbed?	Are "Normal Circumstanc	es" present? Yes	, X No
Are Vegetation , Soil , or Hy		ly problematic?		explain any answers in Re	
SUMMARY OF FINDINGS - Attach site map	<u>—</u>	•			inarks.)
Hydrophytic Vegetation Present? Yes	No X	onit locations, i	nansects, important lea		
Hydric Soil Present? Yes	No X	la tha S	ampled Area within a Wet	land? Yes	No. V
· —		is the Sa	ampied Area willim a wei	lanu? res_	No_X_
Wetland Hydrology Present? Yes	No_X				
Paired upland point for PEM-1A, Sample Poin					
VEGETATION - Use scientific names of pla	nts.		T		
Tree Stratum (Plot size: 30x30 ft)	Absolute Domina % Cover Species		Dominance Test Worl Number of Dominant S		
Tiee Stratum (Flot size)	% Cover Species	s? Status	That Are OBL, FACW,	•	0 (4)
1			(excluding FAC-):	——————————————————————————————————————	0 (A)
2			, ,		
3			Total Number of Domir		0 (n)
4			Species Across All Stra	ata:	3 (B)
5					
<u> </u>	0 = Total Co	over	Percent of Dominant S	•	
Sapling/Shrub Stratum (Plot size: 15x	15 <u>ft</u>)		That Are OBL, FACW,	or FAC:	0% (A/B)
1					
2			Prevalence Index Wo		
3			Total % Cove		Multiply by:
4			OBL species	<u>0 x</u> 1=	
5			FACW species	0 x 2 =	= 0
	0 = Total Co	over	FAC species	0 x 3 =	= 0
Herb Stratum (Plot size: 5x5 ft)			FACU species	18 x 4 =	72
1. Bromus inermis	25 Y	UPL	UPL species	65 x 5 =	325
2. Thinopyrum ponticum	40 Y	NI	Column Totals:	83(A)	397 (B)
3. Cirsium arvense	18Y	FACU	Pre	valence Index = B/A =	4.8
4			Hydrophytic Vegetation	on Indicators:	
5			1. Rapid	Test for Hydrophytic Vege	etation
6.			2. Domin	ance Test is >50%.	
7.			3. Preval	ence Index is <3.01	
8.				ological Adaptations¹ (Pro	
9.			porting d	ata in Remarks or on a se	parate sheet)
0			Problema Problema	atic Hydrophytic Vegetatio	n (Explain)
	83 = Total Co	over			
Woody Vine Stratum (Plot size: 30x30	ft)				
1.			¹ Indicators of h	ydric soil and wetland hydro	logy must be
2.				disturbed or problematic.	
	0 = Total	Cover			
% Bare Ground in Herb Stratum 1	7 %		Hydrophytic Ve	getation Present?	Yes X No
				-	
Remarks:	 		1		
Species with no indicator (NI) are treated as L	JPL for this analysis				
	, - / - -				

SOIL Sampling Point: S-2B

Depth	Matrix			Redox Fe	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	10 YR 3/2	100					sandy clay	
7-18	10 YR 6/3	100					sandy clay	30% rock/cobble
¹ Type: C=Co	oncentration, D=Dep	oletion RM=F	Reduced Matrix	CS=Cover	ed or Coa	ated Sand Grains	² Location: PL	=Pore Lining, M=Matrix
Hydric Soil I	•							tors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandy	Gleved M	Matrix (S4)	maica	1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	: Histic (A3)		_		ed Matrix	•		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)		_			lineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LF	DD E\	_		-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	•	_		ed Matrix			
	eted Below Dark Sur		_		Dark Sur	,	-	Reduced Vertic (F18) - Red Parent Material (TF2)
	Dark Surface (A12)		_			Surface (F7)	-	Other (Explain in Remarks)
	y Mucky Mineral (S	,	_		Depressi	` '	<u> </u>	-
	y widcky willeral (3	1)	_			ressions (F16)		ators of hydrophylic vegetation and nd hydrology must be present, unless
	m Mucky Peat or Pe	at (S2) (I PE) C H/			169910119 (1.10)	WELIAI	iu nyurology must be present, umess
2.5 cr	m Mucky Peat or Pea		_				distur	bed or problematic.
2.5 cr	m Mucky Peat or Pea Mucky Peat or Pea		_		RA 72 & 73		distur	bed or problematic.
2.5 cm	-		_				distur	bed or problematic.
2.5 cm	Mucky Peat or Pea		_				disturi	bed or problematic.
2.5 cm 5 cm	Mucky Peat or Peat _ayer: (if observed)		_					oil Present? Yes No X
2.5 cm 5 cm Restrictive L Type:	Mucky Peat or Peat _ayer: (if observed)		_					
2.5 cm 5 cm Restrictive L Type: Depth (inc.)	Mucky Peat or Peat _ayer: (if observed)		_					
2.5 cm 5 cm Type: Depth (inco	Mucky Peat or Peat ayer: (if observed) hes):		_					
2.5 cm 5 cm Type: Depth (inc.) Remarks:	Mucky Peat or Peat ayer: (if observed) hes):	t (S3) (LRR F	_					
2.5 cm 5 cm Type: Depth (inc.) Remarks: HYDROLOG	Mucky Peat or Peat Layer: (if observed) hes): Y drology Indicators:	t (S3) (LRR F		(MLR		of LRR H)	Hydric S	oil Present? Yes No X
2.5 cm 5 cm Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat Layer: (if observed) thes): Y drology Indicators: eators (minimum of contents)	t (S3) (LRR F	ed; check all that	(MLR	RA 72 & 73	of LRR H)	Hydric S	oil Present? Yes No X
2.5 cm 5 cm Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic Surface	Mucky Peat or Peat Layer: (if observed) thes): Y drology Indicators: cators (minimum of oce Water (A1)	t (S3) (LRR F	ed; check all that	apply) alt Crust (E	RA 72 & 73	of LRR H)	Hydric S	oil Present? Yes No X tors (minimum of two required) Surface Soil Cracks (B6)
2.5 cm 5 cm Restrictive L Type: Depth (inco	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2)	t (S3) (LRR F	ed; check all that	apply) alt Crust (E	B11) Ina (B13)	of LRR H)	Hydric S	oil Present? Yes No _X tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
2.5 cm 5 cm Restrictive L Type: Depth (incompleted in the completed in the	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of occurrence (A1) Water Table (A2) Eation (A3)	t (S3) (LRR F	ed; check all that	apply) alt Crust (I quatic Fau	B11) una (B13)	of LRR H) S or (C1)	Hydric S	oil Present? Yes No _X tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
2.5 cm 5 cm Restrictive L Type: Depth (incompleted in the completed in the	Mucky Peat or Peat Layer: (if observed) hes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	t (S3) (LRR F	ed; check all that	apply) alt Crust (Equatic Fau	B11) una (B13) ulfide Od	of LRR H) Sor (C1) able (C2)	Hydric S	oil Present? Yes No _X tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
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2.5 cm 5 cm Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \ Satura Watel Sedim Drift D	Mucky Peat or Peat Layer: (if observed) hes): Y drology Indicators: cators (minimum of occert (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)	t (S3) (LRR F	ed; check all that	apply) alt Crust (Equatic Faullydrogen Solry-Season widized Rhiz	B11) Ina (B13) Sulfide Ode Water Ta	of LRR H) S or (C1) able (C2) on Living Roots (C3)	Hydric S	oil Present? Yes No X tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
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2.5 cm 5 cm Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \ Satura Watel Sedim Drift D Algal Iron D	Mucky Peat or Peat Layer: (if observed) Arology Indicators: Lators (minimum of occewater (A1) Water Table (A2) Lation (A3) The Marks (B1) Lation (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aer T-Stained Leaves (E	t (S3) (LRR F	ed; check all that	apply) alt Crust (Equatic Faulydrogen Sory-Season ixidized Rhizwhere not dresence of thin Muck Some	B11) Ina (B13) Iulfide Ode Water Ta cospheres of tilled) f Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric S	oil Present? Yes No X fors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm Festrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \ Satura Water Sedim Drift D Algal Iron D Inund Water	Mucky Peat or Peat Layer: (if observed) Area (if observed) Y Arology Indicators: Cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer r-Stained Leaves (E	t (S3) (LRR F	ed; check all that	apply) alt Crust (Equatic Faulydrogen Soly-Season widized Rhizemence of hin Muck Solther (Explain)	B11) una (B13) ulfide Ode Water Ta cospheres of tilled) f Reduced Surface (Cain in Ren	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric S	oil Present? Yes No X Sors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology
2.5 cm 5 cm Festrictive L Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift D Inund Water Field Observ Surface Water Water Table	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2) Lation (A3) If Marks (B1) Leposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aer In-Stained Leaves (External of the control of the c	t (S3) (LRR F	ed; check all that B7 Yes Yes Yes	apply) alt Crust (Equatic Faully (Equatic Faul	B11) una (B13) ulfide Ode Water Ta cospheres of tilled) f Reduced Surface (Cain in Ren	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) narks)	Hydric S	cors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Deter	mination Data For	m - Great Plains Regio	n	
Project/Site: I-25/I-80 Interchange	City/County: C	heyenne/Laramie	Sampling Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Transporta	ition	State: WY	Sampling Point:	S-1C
Investigator(s): R. Newton, D. Soucy		Section, T	ownship, Range: S1	1 T13N R67W
Landform (hillslope, terrace, etc.): depression	Local Relief ((concave, convex, none):	oncave	Slope (%): 0-3
Subregion (LRR): G - Western Great Plains	 Lat. 22	3813.6541 Long:	743819.0328	Datum: WY E
Soil Map Unit Name: Merden silty clay loam, 0 to 3 p	ercent slopes	NW	l Classification:	PEMA/PEMC
Are climatic/hydrologic conditions on the site typical fo	r this time of year? Y	es X No (If n	o, explain in Remarks	s)
Are Vegetation , Soil , or Hydrology	significantly disturbed?	? Are "Normal Circumstances" p	•	X No
Are Vegetation , Soil , or Hydrology	naturally problematic?		ain any answers in Re	
			•	illaiks.)
SUMMARY OF FINDINGS - Attach site map showing		, transects, important leatures	, etc.	
Hydrophytic Vegetation Present? Yes X No				
Hydric Soil Present? Yes X No	Is the S	Sampled Area within a Wetland	? Yes_	X No
Wetland Hydrology Present? Yes X No				
Remarks: NWI-mapped depressional palustrine emergent wetlan	d PEM-1B. Area also include	es NHD-mapped Clear Creek, b	ut no channel feature	es are present.
VEGETATION - Use scientific names of plants.		,		
Absolu	te Dominant Indicator	Dominance Test Workshe	 et:	
Tree Stratum (Plot size: 30x30 ft) % Cov		Number of Dominant Specie		
1.		That Are OBL, FACW, or FA	₹C:	1 (A)
2.		(excluding FAC-):		
3.		Total Number of Dominant		
4.		Species Across All Strata:		1 (B)
5.		-		
Sapling/Shrub Stratum (Plot size: 15x15 ft)	= Total Cover	Percent of Dominant Specie That Are OBL, FACW, or FA		100% (A/B)
''		Prevalence Index Worksho	eet:	
3.		Total % Cover of		Multiply by:
4.		OBL species	89 x 1 =	
		FACW species	4 x 2 =	
0	= Total Cover	FAC species	0 x 3 =	= 0
Herb Stratum (Plot size: 5x5 ft)	_	FACU species	0 x 4 =	= 0
1. Eleocharis palustris 89	Y OBL	UPL species	0 x 5 =	0
2. Mentha arvensis 4	N FACW	Column Totals:	93 (A)	97 (B)
3.		- Prevalen	ice Index = B/A =	1.0
4.		Hydrophytic Vegetation In	dicators:	
5.		- · · · · · · · · · · · · · · · · · ·	for Hydrophytic Vege	etation
6.		X 2. Dominance		
7.		X 3. Prevalence		
8.		_ I	cal Adaptations¹ (Pro	vide sup-
9.		porting data ir	n Remarks or on a se	parate sheet)
0.		- Problematic H	lydrophytic Vegetatio	n (Explain)
93	= Total Cover	-	, , , ,	(
Woody Vine Stratum (Plot size: 30x30 ft)	<u> </u>			
1		1 Indicators of hydric	soil and wetland hydrol	lagu must ba
<u> </u>		present, unless distu		logy must be
0	= Total Cover	p. eserre, arriess dista	and or production	
% Bare Ground in Herb Stratum 7 %		Hydrophytic Vegetat	ion Present?	X YesNo
Remarks:				

Sampling Point:

S-1C

Depth (inches)	Matrix			Redox I	Features			
i)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	5Y 2.5/1	100	, , ,		-		muck	
2-7	10 YR 3/2	100					silty clay	
7-11	10 YR 3/2	95	7.5 YR 4/6	5	С	М	silty clay	
11-15	10 YR 5/2	100					sand	
						·		
						·		
¹ Type: C=Cc	ncentration, D=Dep	letion, RM	=Reduced Matrix	, CS=Cov	ered or Co	pated Sand Grains.	² Location: PL	=Pore Lining, M=Matrix
Hydric Soil I	·			•				tors for Problematic Hydric Soils ³ :
•	sol (A1)			Sand	dy Gleyed	Matrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		•		dy Redox (Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		•		ped Matrix	•		Dark Surface (S7) (LRR G)
	gen Sulfide (A4)		•		•	Mineral (F1)		High Plains Depressions (F16)
	ied Layers (A5) (LR	RF)	•			Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F ,	•	•		eted Matri			Reduced Vertic (F18)
	ted Below Dark Sur					urface (F6)		Red Parent Material (TF2)
	Dark Surface (A12)		•			Surface (F7)		Other (Explain in Remarks)
	/ Mucky Mineral (S1		•		ox Depress	, ,	3Indics	ators of hydrophylic vegetation and
	n Mucky Peat or Pe	-	RR G, H)	—— High	Plains De	pressions (F16)		nd hydrology must be present, unless
	Mucky Peat or Peat				LRA 72 & 7		disturb	ped or problematic.
			- · <u> </u>				T	
	ayer: (if observed)							
Туре:								
							Hydric S	oil Present? Yes X No
Type: Depth <i>(incl</i>							Hydric S	oil Present? Yes X No
Type: Depth <i>(incl</i>							Hydric S	oil Present? Yes X No
Type: Depth <i>(incl</i>	nes):						Hydric S	oil Present? Yes X No
Type: Depth (incl Remarks: HYDROLOG	nes):						Hydric S	oil Present? Yes X No
Type:	nes):	one is requ	ired; check all tha	at apply)		s		oil Present? Yes X No
Type:	ries): Y Irology Indicators:	nne is requ	ired; check all tha	at apply) Salt Crust	t (B11)	S		
Type: Depth (incl Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface	rhes): Y Irology Indicators: ators (minimum of o	nne is requ	ired; check all tha	Salt Crust	t (B11) auna (B13			ors (minimum of two required)
Type:	Y Irology Indicators: ators (minimum of o	one is requ	ired; check all tha	Salt Crust Aquatic F	, ,)		ors <i>(minimum of two required)</i> Surface Soil Cracks (B6)
Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic: Surfac X High \ X Satura	rhes): Y Irology Indicators: ators (minimum of o	one is requ	ired; check all tha	Salt Crust Aquatic F Hydrogen	auna (B13) dor (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Type:	rhes): Irology Indicators: ators (minimum of of the Water (A1) Water Table (A2) ation (A3)	one is requ	ired; check all the	Salt Crust Aquatic F Hydrogen Dry-Seaso	auna (B13 Sulfide Oo on Water T) dor (C1)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Type:	rhes): Y Irology Indicators: ators (minimum of of the Water (A1) Nater Table (A2) ation (A3) Marks (B1)	one is requ	ired; check all tha	Salt Crust Aquatic F Hydrogen Dry-Seaso	auna (B13 Sulfide Od on Water T hizospheres) dor (С1) Гable (С2)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Type: Depth (incl Remarks: HYDROLOGY Wetland Hyd Primary Indicates Surface X High N X Saturates Water Sedim Drift D	rhes): Y Irology Indicators: ators (minimum of of or	one is requ	ired; check all tha	Salt Crust Aquatic For Hydrogen Dry-Seaso Oxidized Richert Individual	auna (B13 Sulfide Od on Water T hizospheres ot tilled)) dor (С1) Гable (С2)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Type: Depth (incl Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface X High V X Satura Water Sedim Drift D X Algal	rices): Irology Indicators: ators (minimum of of or	one is requ	ired; check all tha	Salt Crust Aquatic F. Hydrogen Dry-Sease Oxidized RI (where no	auna (B13 Sulfide Od on Water T hizospheres ot tilled)) dor (C1) Fable (C2) on Living Roots (C3) ed Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Type:	rhes): Y Irology Indicators: ators (minimum of of or or or of or			Salt Crust Aquatic Fa Hydrogen Dry-Sease Oxidized Ra (where no Presence Thin Mucl	auna (B13 Sulfide Od on Water T hizospheres ot tilled) of Reduce	dor (C1) Fable (C2) on Living Roots (C3) ed Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Type: Depth (incl Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface X High N X Satura Water Sedim Drift D X Algal I Iron D Inunda	rhes): Y Irology Indicators: ators (minimum of of or	ial Imager <u>y</u>		Salt Crust Aquatic Fa Hydrogen Dry-Sease Oxidized Ra (where no Presence Thin Mucl	auna (B13 Sulfide Oc on Water T hizospheres of tilled) of Reduce k Surface (dor (C1) Fable (C2) on Living Roots (C3) ed Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Type:	rology Indicators: ators (minimum of of other Cators) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeric-Stained Leaves (B	ial Imager <u>y</u>		Salt Crust Aquatic Fa Hydrogen Dry-Sease Oxidized Ra (where no Presence Thin Mucl	auna (B13 Sulfide Oc on Water T hizospheres of tilled) of Reduce k Surface (dor (C1) Fable (C2) on Living Roots (C3) ed Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C4) Geomorphic Position (D2) (4) FAC-Neutral Test (D5)
Type: Depth (incl Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface X High V X Satura Water Sedim Drift D X Algal I Iron D Inunda Water	rices): Irology Indicators: ators (minimum of of or	ial Imager <u>y</u>		Salt Crust Aquatic F Hydrogen Dry-Sease Oxidized R (where ne Presence Thin Mucl Other (Ex	auna (B13 Sulfide Oc on Water T hizospheres of tilled) of Reduce k Surface (dor (C1) Fable (C2) on Living Roots (C3) ed Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C4) Geomorphic Position (D2) (4) FAC-Neutral Test (D5)
Type: Depth (incl Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface X High N X Satura Water Sedim Drift D X Algal I Iron D Inunda	res): Irology Indicators: ators (minimum of of other Cale) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aerical Cale	ial Imager <u>y</u>	y (B7)	Salt Crust Aquatic F. Hydrogen Dry-Sease Oxidized RI (where no Presence Thin Mucl Other (Ex	auna (B13 Sulfide Oc on Water T hizospheres ot tilled) of Reduce k Surface (plain in Re	dor (C1) Fable (C2) Fon Living Roots (C3) For Iron (C4) For Iron (C7) For Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

US Army Corps of Engineers

Wetland	Determin	nation Da	ata Forr	n - Grea	nt Plains Regi	ion		
Project/Site: I-25/I-80 Interchange		City/	County: Ch	eyenne/La	ramie	Sampling Da	ate: 7/ :	31/2019
Applicant/Owner: Wyoming Dept. of T	ransportation				State: WY	- Sampling Po	oint:	S-2C
Investigator(s): R. Newton, D. Soucy					Section	, Township, Range	: S11 T13N	R67W
Landform (hillslope, terrace, etc.): bank	slope	Lo	cal Relief <i>(c</i>	oncave, co	nvex, none):	none	Slope	(%): 0-3
Subregion (LRR): G - Western Great Pl	ains	Lat.	222	118.7961	Long:	743889.9121	Datu	m: WY E
Soil Map Unit Name: Merden silty clay loar	n, 0 to 3 perce	nt slopes			N	WI Classification:		UPL
Are climatic/hydrologic conditions on the site	typical for this	s time of year?	Ye	s X	No (li	f no, explain in Ren	narks)	
Are Vegetation , Soil , or H	ydrology	significantly	disturbed?	Are "Norma	al Circumstances	" present? Yes)	X No
Are Vegetation , Soil , or H	ydrology	naturally pro	blematic?		(If needed, ex	plain any answers i	in Remarks	<u> </u>
SUMMARY OF FINDINGS - Attach site ma		mpling point	locations, t	transects.				
Hydrophytic Vegetation Present? Yes			•	•	•	·		
Hydric Soil Present? Yes	No X	_	Is the S	ampled Are	ea within a Wetlar	nd?	Yes N	No X
Wetland Hydrology Present? Yes	No X	_	10 1110 01	ampiou 7 ii c	a mama mada			<u> </u>
Remarks:		_						
Paired upland point for PEM-1B, Sample Poi	nt 1C.							
VEGETATION - Use scientific names of pl	ants.							
	Absolute	Dominant	Indicator		nce Test Worksl			
Tree Stratum (Plot size: 30x30 ft)	% Cover	Species?	Status		of Dominant Spe			
1					OBL, FACW, or ng FAC-):	FAC:	2	(A)
2				(excludii	ig i AC-) .			
3					mber of Dominar		0	(5)
4				Species	Across All Strata	•	2	(B)
5	0 =	Total Cover						
	(15 ft)	- Total Gover			of Dominant Spe OBL, FACW, or		100%	′о (A/B)
1	.1 <u>3 1t</u>)			That Aic	OBE, I AOW, OF	1 AO.	100 /	, (A/B)
2.				Prevale	nce Index Works	sheet:		
3.					Total % Cover		Multir	ply by:
4.				OBL	species	40	x 1 =	40
5.				FACW	species	20	x 2 =	40
	0 =	Total Cover		FAC	species	12	x 3 =	36
Herb Stratum (Plot size: 5x5 ft)				FACU	species	15	x 4 =	60
1. Euphorbia esula	8	N	NI	UPL	species	8 2	x 5 =	40
2. Asclepias speciosa	12	N	FAC	Column	Totals:	95	(A)	216 (B)
3. Juncus balticus	20	Υ	FACW		Preval	ence Index = B/A =	= 2.3	3
4. Cirsium arvense	10	N	FACU	Hydropl	nytic Vegetation	Indicators:		
5. Glycyrrhiza lepidota	5	N	FACU		X 1. Rapid Te	st for Hydrophytic	Vegetation	
6. Carex nebrascensis	40	Υ	OBL			ce Test is >50%.		
7						ce Index is <3.01		
8				,		ogical Adaptations ¹		
9						in Remarks or on	·	,
10.					Problemation	Hydrophytic Vege	tation (Expl	ain)
		Total Cover						
Woody Vine Stratum (Plot size: 30x30	<u>ft</u>)				_			
1						ic soil and wetland h		st be
<u></u>	0	= Total Cove	<u> </u>		present, unless dis	turbed or problemat	ic.	
_ % Bare Ground in Herb Stratum	0 5 %	- 10tai 00V	J.		Hydrophytic Vege	tation Present?	X Ye	es No
					, a. opii, de vege			
Remarks:								
Species with no indicator (NI) are treated as	UPL for this ar	nalvsis.						
	2. 2 .0. and an	,						

SOIL Sampling Point: S-2C

Depth	Matrix			Redox Fe	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	10 YR 2/2	100					clay loam	
7-18	10 YR 5/3	100					sand	
			_					
			-					
¹ Type: C=Cc	oncentration, D=Dep	oletion RM=R	Reduced Matrix	CS=Cover	ed or Cos	eted Sand Grains	² Location: PL =	Pore Lining, M=Matrix
Hydric Soil I	•	Jiction, rawi–r	teduced Matrix,	00-00101	Cu 01 006	ned Garid Grains.		ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandy	Gloved N	Matrix (S4)		. cm Muck (A9) (LRR I, J)
	, ,		_		Redox (S			
	Epipedon (A2)		_		ed Matrix	,		Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		_			` ,		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)	3D E\	_		-	fineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LF	•	_		-	Matrix (F2)	_	(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,		_		ed Matrix	` '		Reduced Vertic (F18)
	eted Below Dark Sur		_			face (F6)		Red Parent Material (TF2)
	Dark Surface (A12)	,	_			Surface (F7)		Other (Explain in Remarks)
Sandy	y Mucky Mineral (S	•			Depressi			ors of hydrophylic vegetation and
			(G H)	High P	lains Dep	ressions (F16)		l hydrology must be present, unless
	m Mucky Peat or Pe		_				disturbe	ed or problematic
	m Mucky Peat or Pea Mucky Peat or Pea		_		A 72 & 73	of LRR H)	disturbe	ed or problematic.
5 cm	-		_		A 72 & 73	of LRR H)	disturbe	ed or problematic.
5 cm	Mucky Peat or Pea		_		A 72 & 73	of LRR H)	disturbe	ed or problematic.
5 cm	Mucky Peat or Peat _ayer: (if observed)		_		A 72 & 73	of LRR H)		ed or problematic. il Present? Yes No_X
5 cm Restrictive L Type:	Mucky Peat or Peat _ayer: (if observed)		_		A 72 & 73	of LRR H)		
5 cm Restrictive L Type: Depth (inc.)	Mucky Peat or Peat _ayer: (if observed)		_		A 72 & 73	of LRR H)		
5 cm Restrictive L Type: Depth (inc.) Remarks:	Mucky Peat or Peat ayer: (if observed) hes):		_		A 72 & 73	of LRR H)		
Festrictive L Type: Depth (inc.) Remarks:	Mucky Peat or Peat ayer: (if observed) hes):	t (S3) (LRR F	_		A 72 & 73	of LRR H)		
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc	Mucky Peat or Peat Layer: (if observed) hes): Y drology Indicators:	t (S3) (LRR F		(MLR	A 72 & 73		Hydric So	il Present? Yes No X
Femarks: 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic	Mucky Peat or Peat Layer: (if observed) thes): Y drology Indicators: eators (minimum of contents)	t (S3) (LRR F	d; check all that	(MLR			Hydric So	il Present? Yes No X
Femarks: 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surface	Mucky Peat or Peat Layer: (if observed) thes): Y drology Indicators: cators (minimum of oce Water (A1)	t (S3) (LRR F	d; check all that	apply) alt Crust (E	311)		Hydric So	il Present? Yes No X rs (minimum of two required) Surface Soil Cracks (B6)
Femarks: Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfar High	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2)	t (S3) (LRR F	d; check all that	apply) alt Crust (E	311) na (B13)	S	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Femarks: Type: _ Depth (inc.) Depth (inc.) Type: _ Depth (inc.) Depth (i	Mucky Peat or Peat Layer: (if observed) Thes): Y Arology Indicators: Eators (minimum of occurrence (A1) Water Table (A2) Lation (A3)	t (S3) (LRR F	d; check all that	apply) alt Crust (I quatic Fau ydrogen S	311) na (B13) ulfide Od	S or (C1)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Femarks: HYDROLOG Wetland Hyc Primary Indic Surfar High Satura Water	Mucky Peat or Peat Layer: (if observed) hes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	t (S3) (LRR F	d; check all that S A	apply) alt Crust (Equatic Fau	311) na (B13) ulfide Od Water Ta	or (C1) able (C2)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfar High V Satur: Watel Sedin	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Cators (minimum of occert (A1) Water Table (A2) Cation (A3) r Marks (B1) ment Deposits (B2)	t (S3) (LRR F	d; check all that	apply) alt Crust (Equatic Faulydrogen Sury-Season	311) ina (B13) ulfide Od Water Ta	S or (C1)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Restrictive L Type: _ Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High V Satura Watel Sedin Drift D	Mucky Peat or Peat Layer: (if observed) hes): Y drology Indicators: cators (minimum of occert (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)	t (S3) (LRR F	d; check all that S A H O O	apply) alt Crust (I quatic Fau ydrogen S ry-Season xidized Rhiz	311) Ina (B13) Ulfide Od Water Ta	or (C1) able (C2) on Living Roots (C3)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High V Satur: Water Sedin Drift I Algal	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Cators (minimum of oce Water (A1) Water Table (A2) Cation (A3) r Marks (B1) Chenent Deposits (B2) Deposits (B3) Mat or Crust (B4)	t (S3) (LRR F	d; check all that S A H O (V	apply) alt Crust (Equatic Faurydrogen Sury-Season kidized Rhizen where not resence of	311) na (B13) ulfide Od Water Ta ospheres of tilled) F Reduceo	or (C1) able (C2) on Living Roots (C3)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surface High V Satura Water Sedin Drift E Algal Iron D	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of of ce Water (A1) Water Table (A2) Lation (A3) If Marks (B1) Linent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	t (S3) (LRR F	d; check all thatSAD0	apply) alt Crust (Equatic Fau ydrogen Sory-Season xidized Rhiz where not resence of thin Muck Some season s	311) Ina (B13) Ulfide Od Water Ta cospheres of tilled) F Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Femarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift D Algal Iron D	Mucky Peat or Peat Layer: (if observed) Arology Indicators: Lators (minimum of occewater (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aer	t (S3) (LRR F	d; check all thatSAD0	apply) alt Crust (Equatic Faurydrogen Sury-Season kidized Rhizen where not resence of	311) Ina (B13) Ulfide Od Water Ta cospheres of tilled) F Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Femarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift D Algal Iron D	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of of ce Water (A1) Water Table (A2) Lation (A3) If Marks (B1) Linent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	t (S3) (LRR F	d; check all thatSAD0	apply) alt Crust (Equatic Fau ydrogen Sory-Season xidized Rhiz where not resence of thin Muck Some season s	311) Ina (B13) Ulfide Od Water Ta cospheres of tilled) F Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyo Primary Indic Surfar High V Satur: Water Sedin Drift D Algal Iron D Inund Water Field Observ	Mucky Peat or Peat Layer: (if observed) Area (if observed) Y Arology Indicators: Cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer r-Stained Leaves (E	t (S3) (LRR F	d; check all thatSAD0	apply) alt Crust (Equatic Faultydrogen Sury-Season wide and the resence of thin Muck Suther (Explain)	311) na (B13) ulfide Od Water Ta ospheres o tilled) f Reduced Surface (Cain in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Femarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift D Algal Iron D Inund Water	Mucky Peat or Peat Layer: (if observed) Area (if observed) Y Arology Indicators: Cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer r-Stained Leaves (E	t (S3) (LRR F	d; check all thatSAD0	apply) alt Crust (Equatic Faultydrogen Sury-Season wide and the resence of thin Muck Suther (Explain)	311) una (B13) ulfide Od Water Ta cospheres of tilled) f Reduced Surface (Cain in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) narks)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive L Type: _ Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High V Satura Water Sedin Drift D Inund Water Field Observ Surface Water Water Table	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2) Lation (A3) If Marks (B1) Leposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aer In-Stained Leaves (External of the control of the c	t (S3) (LRR F	d; check all that S A H O (v P T B7) Yes Yes Yes	apply) alt Crust (Equatic Fau ydrogen Sory-Season xidized Rhiz where not resence of hin Muck Souther (Explain	311) una (B13) ulfide Od Water Ta cospheres of tilled) f Reduced Surface (Cain in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) narks)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland D)etermin <i>a</i>	ation Da	ata Form	า - Gre	at Plains Reg	jion			
Project/Site: I-25/I-80 Interchange		City/	County: Che	eyenne/L	aramie	Sampling [Date:	8/1/201	19
Applicant/Owner: Wyoming Dept. of Train	nsportation			-	State: WY	_ ' Sampling F	oint:	S-1D	,
Investigator(s): R. Newton, D. Soucy					Section	– n, Township, Rang	e: S11 T	13N R67\	w
Landform (hillslope, terrace, etc.): depress	ion	Loc	cal Relief (co	ncave, c	onvex, none):	concave	Slo	ope (%):	0-2
Subregion (LRR): G - Western Great Plair	ıs	Lat.	2238	322.386	Long:	743811.491		Datum: W	ΥE
Soil Map Unit Name: Merden silty clay loam,	0 to 3 percent	slopes			<u> </u>	NWI Classification:		UPL	
Are climatic/hydrologic conditions on the site ty	pical for this tir	me of year?	Yes	X	No (If no, explain in Re	emarks)		
Are Vegetation , Soil , or Hyd	rology s	significantly	disturbed? A	re "Norm	al Circumstances	s" present? Yes		ΧΝ	No
Are Vegetation , Soil , or Hyd.		naturally pro				xplain any answers	s in Rems		
SUMMARY OF FINDINGS - Attach site map s		• •		onooto			, iii i keiiia	11 NS.)	
-		ning point	iocations, ti	ansects,	important leatu	ires, etc.			
Hydrophytic Vegetation Present? Yes X			0			10			
Hydric Soil Present? Yes>			Is the Sa	mpled Ar	ea within a Wetla	ind?	Yes X	_ No	_
Wetland Hydrology Present? Yes>	(No								
Remarks:									
Additional sample point for NWI-mapped depre channel features are present.	ssional palustri	ine emerge	nt wetland P	EM-1B. A	rea also includes	s NHD-mapped Cle	ear Creek	., but no	
VEGETATION - Use scientific names of plan	ts.								
		Dominant	Indicator		nce Test Works				
Tree Stratum (Plot size: 30x30 ft)	% Cover	Species?	Status		of Dominant Spe				
1					e OBL, FACW, or ng FAC-):	r FAC:			(A)
2				CXOIGGI	ng i no j .				
3					ımber of Domina				
4				Species	Across All Strata	a:		1	(B)
5									
Sapling/Shrub Stratum (Plot size: 15x15	0 = To	otal Cover			of Dominant Spe e OBL, FACW, or		1(00%	(A/B)
2				Prevale	nce Index Work	sheet:			
3.				i rovano	Total % Cover		Mı	ultiply by	v:
4.				OBL	species	0	x 1 =	0	/ ·
5.				FACW	species	82	x 2 =	164	_
	0 = To	otal Cover		FAC	species	0	x 3 =	0	_
Herb Stratum (Plot size: 5x5 ft)				FACU	species	8	x 4 =	32	_
1. Calamagrostis stricta	10	N	FACW	UPL	species	0	x 5 =	0	_
2. Juncus balticus	60	Y	FACW	Column	•	90	(A)	196	(B)
3. Mentha arvensis	12	N	FACW			alence Index = B/A		2.2	
4. Cirsium arvense	8	N	FACU	Hydrop	hytic Vegetation				
5.				,	-	est for Hydrophytic	: Vegetati	ion	
6.						nce Test is >50%.	3		
7.						nce Index is <3.01			
8.						ogical Adaptations	s¹ (Provide	e sup-	
9.						a in Remarks or o			t)
10.					Problemati	ic Hydrophytic Veg	etation (F	=xplain)	
	90 = To	otal Cover					(2	-/ P.G/	
Woody Vine Stratum (Plot size: 30x30 ft									
1	— ′				1,		le destes		
2						Iric soil and wetland isturbed or problem		must be	
2	0 =	Total Cove			present, unless un	sturbed of problem	<u> </u>	-	
% Bare Ground in Herb Stratum 10		- Total COVE	21		Hydrophytic Vege	etation Present?	<u> x</u>	Yes	No
				<u></u>					
Remarks:									

SOIL Sampling Point: S-1D

	Matrix			Redox	Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10 YR 2/1	100					Silty Clay		
4-16	10 YR 4/2	95	2.5 YR 4/6	5	С	M	Sand		
¹ Type: C=Co	oncentration, D=Dep	oletion, RM	=Reduced Matrix	k, CS=Cov	ered or Co	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix	
Hydric Soil				<u> </u>				ors for Problematic Hydric S	oils ³ :
•	sol (A1)			Sand	dy Gleyed I	Matrix (S4)		cm Muck (A9) (LRR I, J)	
	Epipedon (A2)				dy Redox (coast Prairie Redox (A16) (LI	RR F, G, H)
	(Histic (A3)				ped Matrix	•		Park Surface (S7) (LRR G)	, -, ,
	ogen Sulfide (A4)				•	Mineral (F1)		ligh Plains Depressions (F16	5)
	ified Layers (A5) (LF	RR F)			•	Matrix (F2)		(LRR H outside of MLRA 7	-
	Muck (A9) (LRR F ,	,			leted Matrix		R	educed Vertic (F18)	- 4.70,
	eted Below Dark Su				ox Dark Su	` '		ed Parent Material (TF2)	
	Dark Surface (A12	, ,				Surface (F7)		Other (Explain in Remarks)	
	y Mucky Mineral (S	,			ox Depress	` ,		ors of hydrophylic vegetatic	and
	m Mucky Peat or Pe	-	R G. H)			pressions (F16)		hydrology must be present	
		` , `	-, ,					ed or problematic.	,
	Mucky Peat or Pea	t (S3) (LRR	'F)	(M	ILRA 72 & 73	3 of LRR H)	distarbe	d of problematic.	
5 cm	Mucky Peat or Pea		? F)	(M	ILRA 72 & 73	3 of LRR H)	T	ed of problematic.	
5 cm	Mucky Peat or Pea		. F)	(M	ILRA 72 & 73	3 of LRR H)	distarbe	d of problematic.	
5 cm Restrictive I Type:	Layer: (if observed)		R F) 	(M	ILRA 72 & 73	3 of LRR H)			
5 cm	Layer: (if observed)		R F) 	(M	ILRA 72 & 73	3 of LRR H)		il Present? Yes X	No
5 cm Restrictive I Type: Depth (inc	Layer: (if observed)		R F) 	(M	ILRA 72 & 73	3 of LRR H)			No
5 cm Restrictive I Type: Depth (inc	Layer: (if observed)		R F) 	(M	ILRA 72 & 73	3 of LRR H)			No
5 cm Restrictive I Type: Depth (incompress) Remarks:	Layer: (if observed)		R F)	(M	ILRA 72 & 73	3 of LRR H)			No
5 cm Restrictive I Type: Depth (inc) Remarks:	Layer: (if observed)		R F)	(M	ILRA 72 & 73	3 of LRR H)			No
Femarks: Type: Depth (incompleted) Remarks: HYDROLOG Wetland Hyde	Layer: (if observed) ches):				ILRA 72 & 73		Hydric Soi	il Present? Yes X	
Femarks: 5 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic	Layer: (if observed) Shes): GY drology Indicators: cators (minimum of cators)			at apply)			Hydric Soi	il Present? Yes X	red)
Frimary Indices	ches): Grant Gran			at apply)	t (B11)	S	Hydric Soi	il Present? Yes X Trs (minimum of two requing Surface Soil Cracks (Be	red)
Femarks: HYDROLOG Wetland Hyd Surfa High	ches): drology Indicators: cators (minimum of ace Water (A1) Water Table (A2)			at apply) Salt Crust Aquatic F	t (B11) auna (B13)	s	Hydric Soi	rs (minimum of two requires Surface Soil Cracks (B6_Sparsley Vegetated Concave	red) 6) • Surf. (B8)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	ches): drology Indicators: cators (minimum of other (A1) Water Table (A2) ration (A3)			at apply) Salt Crust Aquatic F Hydrogen	t (B11) auna (B13) Sulfide Oc	S) dor (C1)	Hydric Soi	rs (minimum of two requires Surface Soil Cracks (Be Sparsley Vegetated Concave Drainage Patterns (B10)	red) 6) Surf. (B8)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	ches): GY drology Indicators: cators (minimum of other (A1)) Water Table (A2) ration (A3) or Marks (B1)			at apply) Salt Crust Aquatic F Hydrogen Dry-Sease	t (B11) auna (B13) Sulfide Oc on Water T	S dor (C1)	Hydric Soi	rs (minimum of two requires Surface Soil Cracks (B6_Sparsley Vegetated Concave	red) 6) Surf. (B8) O) on Living
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	ches): drology Indicators: cators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2)			at apply) Salt Crust Aquatic F Hydrogen Dry-Seaso	t (B11) auna (B13) Sulfide Oc on Water T hizospheres	S) dor (C1)	Hydric Soi	rs (minimum of two requires Surface Soil Cracks (Besparsley Vegetated Concaved Drainage Patterns (B10 Oxidized Rhizospheres Roots (C3) (where tilled	red) 6) Surf. (B8) O) on Living
Restrictive I Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I	ches): drology Indicators: cators (minimum of of other Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3)			at apply) Salt Crust Aquatic F Hydrogen Dry-Sease Oxidized R	t (B11) auna (B13) Sulfide Oc on Water T hizospheres ot tilled)	S dor (C1) Table (C2) on Living Roots (C3)	Hydric Soi	rs (minimum of two requires Surface Soil Cracks (Bosparsley Vegetated Concaves Drainage Patterns (B10 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8)	red) 6) surf. (B8) 0) on Living d)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	ches): GY drology Indicators: cators (minimum of once Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)			at apply) Salt Crust Aquatic F Hydrogen Dry-Sease Oxidized R (where no	t (B11) auna (B13) Sulfide Oc on Water T hizospheres ot tilled) of Reduce	Solution (C1) Table (C2) on Living Roots (C3) and Iron (C4)	Hydric Soi	rs (minimum of two requires Surface Soil Cracks (Besparsley Vegetated Concaved Drainage Patterns (B10 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8)	red) 6) 9 Surf. (B8) 0) on Living d)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron [ches): GY drology Indicators: cators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	: one is requi	ired; check all th	at apply) Salt Crust Aquatic F Hydrogen Dry-Sease Oxidized R (where no	t (B11) auna (B13) Sulfide Ocon Water T hizospheres ot tilled) of Reduce	Solution (C1) Fable (C2) on Living Roots (C3) and Iron (C4) C7)	Hydric Soi	rs (minimum of two requires Surface Soil Cracks (BC Sparsley Vegetated Concave Drainage Patterns (B10 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8) Saturation Visible on Aeria Geomorphic Position (E	red) 6) 9 Surf. (B8) 0) on Living d)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	ches): drology Indicators: cators (minimum of other of the other of t	: one is requi	ired; check all th	at apply) Salt Crust Aquatic F Hydrogen Dry-Sease Oxidized R (where no	t (B11) auna (B13) Sulfide Oc on Water T hizospheres ot tilled) of Reduce	Solution (C1) Fable (C2) on Living Roots (C3) and Iron (C4) C7)	Hydric Soi	rs (minimum of two requires Surface Soil Cracks (Besparsley Vegetated Concaved Drainage Patterns (B10 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8) Saturation Visible on Aeria Geomorphic Position (EFAC-Neutral Test (D5)	red) Surf. (B8) On Living d) I Imagery (C9)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	ches): GY drology Indicators: cators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	: one is requi	ired; check all th	at apply) Salt Crust Aquatic F Hydrogen Dry-Sease Oxidized R (where no	t (B11) auna (B13) Sulfide Ocon Water T hizospheres ot tilled) of Reduce	Solution (C1) Fable (C2) on Living Roots (C3) and Iron (C4) C7)	Hydric Soi	rs (minimum of two requires Surface Soil Cracks (BC Sparsley Vegetated Concave Drainage Patterns (B10 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8) Saturation Visible on Aeria Geomorphic Position (E	red) Surf. (B8) On Living d) I Imagery (C9)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	ches): GY drology Indicators: cators (minimum of other (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aeronal Control (B4) or Stained Leaves (Examples)	: one is requi	ired; check all th	at apply) Salt Crust Aquatic F Hydrogen Dry-Sease Oxidized R (where no	t (B11) auna (B13) Sulfide Ocon Water T hizospheres ot tilled) of Reduce	Solution (C1) Fable (C2) on Living Roots (C3) and Iron (C4) C7)	Hydric Soi	rs (minimum of two requires Surface Soil Cracks (Besparsley Vegetated Concaved Drainage Patterns (B10 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8) Saturation Visible on Aeria Geomorphic Position (EFAC-Neutral Test (D5)	red) Surf. (B8) On Living d) I Imagery (C9)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	ches): GY drology Indicators: cators (minimum of other (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aeronal Control (B4) or Stained Leaves (Examples)	: one is requi	ired; check all th	at apply) Salt Crust Aquatic F Hydrogen Dry-Sease Oxidized R (where ne Presence Thin Mucl	t (B11) auna (B13) Sulfide Ocon Water T hizospheres ot tilled) of Reduce	dor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	Hydric Soi	rs (minimum of two requires Surface Soil Cracks (Bester Sparsley Vegetated Concaver Drainage Patterns (B10 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8) Saturation Visible on Aeria Geomorphic Position (EFAC-Neutral Test (D5) Frost-Heave Hummocks (EWetland Hydrometric Position (EFAC-Neutral Test (D5) Frost-Heave Hummocks (EWetland Hydrometric Position (EFAC-Neutral Test (D5) Frost-Heave Hummocks (EWETLAND TEST (D5) Frost-Heave (red) 6) 9 Surf. (B8) 0) on Living d) I Imagery (C9) 07) (LRR F)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate Field Obsert Surface Wate Water Table	ches): GY drology Indicators: cators (minimum of orace Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer or-Stained Leaves (Evations: er Present?	: one is requi	ired; check all the	at apply) Salt Crust Aquatic F Hydrogen Dry-Sease Oxidized R (where no	t (B11) auna (B13) Sulfide Oc on Water T hizospheres ot tilled) of Reduce k Surface (dor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Hydric Soi	rs (minimum of two requires Surface Soil Cracks (Besparsley Vegetated Concaved Drainage Patterns (B10 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8) Saturation Visible on Aeria Geomorphic Position (EFAC-Neutral Test (D5) Frost-Heave Hummocks (E	red) 6) 9 Surf. (B8) 0) on Living d) I Imagery (C9) 07) (LRR F)

Wetland D	Determinatio	n Data For	m - Great Plains Regio	n	
Project/Site: I-25/I-80 Interchange		City/County: C	neyenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Tran	sportation	· · -	State: WY	Sampling Point:	S-2D
Investigator(s): R. Newton, D. Soucy			Section, T	ownship, Range: S11	T13N R67W
Landform (hillslope, terrace, etc.): minor ter	race	Local Relief (concave, convex, none): m	inor concave S	Slope (%): 0-1
Subregion (LRR): G - Western Great Plain	S	Lat. 222	.199.8536 Long:	743721.5407	Datum: WY E
Soil Map Unit Name: Merden silty clay loam, 0	to 3 percent slope	s	NWI	Classification:	UPL
Are climatic/hydrologic conditions on the site ty	pical for this time c	f year? Ye	es X No (If no	o, explain in Remarks)	
Are Vegetation , Soil , or Hydr	ology signifi	cantly disturbed?	Are "Normal Circumstances" pr	esent? Yes	X No
Are Vegetation , Soil , or Hydr	ology natura	Illy problematic?	(If needed, expla	in any answers in Ren	narks.)
SUMMARY OF FINDINGS - Attach site map s	showing sampling	point locations,	transects, important features	, etc.	
Hydrophytic Vegetation Present? Yes X			•		
Hydric Soil Present? Yes	No X	Is the S	ampled Area within a Wetland?	Yes	No X
Wetland Hydrology Present? Yes	No X		'		
_					
Remarks:					
Deired unland a sint for DEM 4D. Commis Deiret	10				
Paired upland point for PEM-1B, Sample Point					
VEGETATION - Use scientific names of plan	ts.		<u> </u>		
Tree Stratum (Plot size: 30x30 ft)	Absolute Domin % Cover Specie		Dominance Test Workshee Number of Dominant Specie		
1.	70 COVOI OPOOR	ou. Olalao	That Are OBL, FACW, or FA		1 (A)
2.			(excluding FAC-):		
3.			Total Number of Dominant		
4.			Species Across All Strata:		2 (B)
5.			• '		
Sapling/Shrub Stratum (Plot size: 15x15	0 = Total 0	Cover	Percent of Dominant Specie That Are OBL, FACW, or FA		50% (A/B)
2.			Prevalence Index Worksho	et:	
3.			Total % Cover of:	<u> </u>	/lultiply by:
4			OBL species	0 x 1 =	0
5			FACW species	40 x 2 =	80
	0 = Total C	Cover	FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)	05 \	E4 0)4/	FACU species	40 x 4 =	160
1. Juncus balticus	25 Y 40 Y	FACW	UPL species	$0 \times 5 =$	0
Cirsium arvense Calamagrostis stricta	15 N	FACU FACW	Column Totals:	80 (A) ce Index = B/A =	240 (B) 3.0
4.	13 1	TACV	Hydrophytic Vegetation Inc		3.0
5.			• ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	for Hydrophytic Vegeta	ation
6.			2. Dominance		
7.			X 3. Prevalence	Index is ≤3.0¹	
8. 9.				cal Adaptations¹ (Provi Remarks or on a sepa	
10.			- Problematic H	ydrophytic Vegetation	(Explain)
-	80 = Total C	Cover	-	ya. opya.o v ogotaa.o	(=/\pi\a)
Woody Vine Stratum (Plot size: 30x30 ft					
1			- I	soil and wetland hydrolog	gy must be
2	0 = Tota	I Cover	present, unless distur	bed of problematic.	
% Bare Ground in Herb Stratum 20	%	ii JOVGI	Hydrophytic Vegetat	ion Present?	X YesNo
Remarks:			1		

SOIL Sampling Point: S-2D

Profile Desc	ription: (Describe	to the dep	th needed to do	cument the	indicator	or con	firm the absence	e of indicators.)	
Depth	Matrix			Redox	Features	;			
(inches)	Color (moist)	%	Color (moist)	%	Туре	1	Loc ²	Texture	Remarks
0-4	10 YR 2/1	100			_			Silty Clay	
4-18	10 YR 4/2	100						Sand	
				_					
¹ Type: C=Cd	oncentration, D=De	pletion, RI	M=Reduced Mat	rix, CS=Co	vered or (Coated	Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil I	ndicators							Indicato	rs for Problematic Hydric Soils ³ :
Histos	ol (A1)			San	dy Gleyed	d Matri	x (S4)	1	cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)			San	dy Redox	(S5)		 c	oast Prairie Redox (A16) (LRR F, G, H)
Black	Histic (A3)			Stri	oped Matr	rix (S6)			ark Surface (S7) (LRR G)
Hydro	gen Sulfide (A4)				my Mucky			—_	igh Plains Depressions (F16)
Stratifi	ied Layers (A5) (LF	RR F)		Loa	my Gleye	d Matri	x (F2)		(LRR H outside of MLRA 72 & 73)
1 cm N	Muck (A9) (LRR F,	G , H)			leted Mat			R	educed Vertic (F18)
Deplet	ted Below Dark Sur	face (A11)	Red	lox Dark S	Surface	(F6)	R	ed Parent Material (TF2)
Thick	Dark Surface (A12))		Dep	leted Darl	k Surfa	ice (F7)		ther (Explain in Remarks)
Sandy	Mucky Mineral (S	1)		Red	lox Depre	ssions	(F8)	3Indicate	ors of hydrophylic vegetation and
2.5 cm	n Mucky Peat or Pe	eat (S2) (L l	RR G, H)	—— Higl	n Plains D	epress	ions (F16)		hydrology must be present, unless
5 cm N	Mucky Peat or Pea	t (S3) (LRI	R F)	(N	/ILRA 72 &	73 of LI	RR H)	disturbe	d or problematic.
Postrictive I	_ayer: (if observed)							
Type:	Layer: (II observed)	,							
Depth (inc	ches):							Hydric Soi	I Present? Yes No X
. `								Tiyunc doi	111636HE 163NOX
Remarks:									
HYDROLOG	Υ								
Wetland Hyd	drology Indicators	:							
Primary Indic	ators (minimum of	one is req	uired; check all	that apply)			Se	econdary Indicator	rs (minimum of two required)
Surfac	e Water (A1)			Salt Crus	t (B11)				Surface Soil Cracks (B6)
High V	Vater Table (A2)			Aquatic F	auna (B1	3)			Sparsley Vegetated Concave Surf. (B8)
Satura	ation (A3)			Hydroger	n Sulfide (Odor (C	21)		Drainage Patterns (B10)
Water	Marks (B1)			Dry-Seas	on Water	Table	(C2)		Oxidized Rhizospheres on Living
Sedim	ent Deposits (B2)			Oxidized F	Rhizosphere	es on Liv	ving Roots (C3)		Roots (C3) (where tilled)
Drift D	eposits (B3)			(where n	ot tilled)				Crayfish Burrows (C8)
Algal I	Mat or Crust (B4)			Presence	of Reduc	ced Iro	n (C4)		Saturation Visible on Aerial Imagery (C9)
Iron D	eposits (B5)			_ Thin Muc	k Surface	e (C7)			Geomorphic Position (D2)
Inunda	ation Visible on Aer	ial Imager	y (B7)	Other (Ex	kplain in R	Remark	s)		FAC-Neutral Test (D5)
Water	-Stained Leaves (E	39)		_					Frost-Heave Hummocks (D7) (LRR F)
Field Observ	vations:								
Surface Wate	er Present?		Yes	5	No X	Dep	th (inches)		Wetland Hydrology
Water Table	Present?		Yes		No X	Dep	th (inches)		Present?
Saturation Pr	resent? (includes c	apillary frir	nge) Yes	5 X	No	Dep	th (inches)	surface	Yes X No
Remarks:									
itemarks.									

Wetland Determinat	ion Data Form	- Great Plains Reg	ion	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Transportation		State: WY	Sampling Point:	S-1E
Investigator(s): R. Newton, D. Soucy		Section	, Township, Range: S1	1 T13N R67W
Landform (hillslope, terrace, etc.): depression	Local Relief (co.	ncave, convex, none):	concave	Slope (%): 0-2
Subregion (LRR): G - Western Great Plains	 Lat. 22390	06.2813 Long:	743867.5796	Datum: WYE
Soil Map Unit Name: Merden silty clay loam, 0 to 3 percent slo	ppes	N	WI Classification:	PEMA/PEMC
Are climatic/hydrologic conditions on the site typical for this time	of year? Yes	X No (/	f no, explain in Remark	s)
Are Vegetation , Soil , or Hydrology sign	nificantly disturbed? A	re "Normal Circumstances	•	X No
_ _ · · · · · — ·	urally problematic?		plain any answers in Re	
	• .	,	,	erriarks.)
SUMMARY OF FINDINGS - Attach site map showing samplin	ig point locations, tra	ansects, important leatu	res, etc.	
Hydrophytic Vegetation Present? Yes X No				
Hydric Soil Present? Yes X No	Is the Sar	npled Area within a Wetla	nd? Yes	X No
Wetland Hydrology Present? Yes X No				
Remarks:				
NWI-mapped depressional palustrine emergent wetland PEM-10	C. Area also includes N	NHD-mapped Clear Creek	, but no channel feature	es are present.
VEGETATION - Use scientific names of plants.		<u> </u>		
	minant Indicator ecies? Status	Dominance Test Works Number of Dominant Spe		
Thee Stratum (Plot Size: 30x30 it) % Cover Sp	ecles? Status	That Are OBL, FACW, or		1 (A)
2		(excluding FAC-):		1 (A)
2				
3		Total Number of Dominar Species Across All Strata		1 (B)
5.		Species Across Air Strata		1 (B)
	al Cover			
	di Covei	Percent of Dominant Spe		4000/ (4/5)
Sapling/Shrub Stratum (Plot size: 15x15 ft)		That Are OBL, FACW, or		100% (A/B)
1		Prevalence Index Works	a baati	
2		Total % Cover		Multiply by:
3		OBL species	0 x 1 =	
<u> </u>		FACW species	100 x 2 =	
5 0 = Tota	al Cover		0 x 3 =	
Herb Stratum (Plot size: 5x5 ft)	ai Covei	·	0 x 3 =	
	V	FACU species UPL species	0 x 5 =	
1. Phalaris arundinacea 100	Y FACW	Column Totals:		
2			100 (A) lence Index = B/A =	200 (B) 2.0
3		Hydrophytic Vegetation		2.0
4			est for Hydrophytic Vege	otation
·			ist for Hydrophytic vegt ice Test is >50%.	etation
6			ice lest is >50%.	
·			ogical Adaptations¹ (Pro	wido sup
8			a in Remarks or on a se	
9				
100 = Tota	al Cover	Problematic	c Hydrophytic Vegetatio	m (⊏xpiain)
	ai Covei			
Woody Vine Stratum (Plot size: 30x30 ft)				
<u></u>			ric soil and wetland hydro	logy must be
2		present, unless dis	sturbed or problematic.	
	otal Cover	,		V V
% Bare Ground in Herb Stratum %		Hydrophytic Vege	tation Present?	X Yes No
Remarks:				

Sampling Point:

S-1E

	(:l)	Matrix			Redo	x Features				
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Tucation: PL=Pore Lining, M=Matrix	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc²	Texture	Remarks	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Costed Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Costed Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Costed Sand Grains. Sandy Cleyed Matrix (S4) Histosel (A1) Sandy Redox (S5) Sandy Redox (S5) South Historia, CA2 Historia, CA3 Stripped Matrix (S6) Days Surface (A6) (LRR F, G, H) Loamy Gleyed Matrix (F2) 1 cm Muck (A9) LRR F, G, H) Depleted Matrix (F3) Redox Dark Surface (F6) Thick Dark Surface (A11) Redox Dark Surface (F6) Sandy Mucky Mineral (F1) Sandy Mucky Mineral (S1) Som Mucky Peat or Peat (S2) (LRR F, G, H) High Plains Depressions (F16) Water Matrix (F3) Redox Depressions (F16) MIRA 72 & 73 of LRR H) Restrictive Layer: (if observed) Type: Depth (inches): HYDROLOGY Wetland Hydrology Indicators: Primary Indicators minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Salt Crust (B11) Surface Water (A1) Surface Soil Cracks (B6) Sparkey Vegatiend Concurs Ga1 Water Marks (B1) Doy-Season Water Table (C2) Sodiment Deposits (B2) Ooduse Rizospheres on Living Roots (C3) Water Marks (B1) Drift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Train Muck Surface (B7) Under Table (C2) Foolith (Feplain in Remarks) Thind Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Train Muck Surface (B7) Under Table (C2) Foolith Impacts (B1) Surface Water (B4) Foolith Impacts (B1) Surface Water (B4) Foolith Impacts (B1) Foolith Deposits (B3) Algal Mat or Crust (B4) Foolith Present? Yes No X Depth (inches) Wetland Hydrology Present?	0-5	10 YR 2/1	100					Silty Clay		
Hydric Soil Indicators Histosol (A1) Sandy Gleyed Matrix (S4) Histosol (A1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sitriped Matrix (S6) Sitriped Matrix (S6) Sitriped Matrix (S6) Sitrified Layers (A5) (LRR 6) Hydrogen Sulfide (A4) Sitriped Matrix (S6) Sitrified Layers (A5) (LRR F) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Sitratified Layers (A5) (LRR F) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Sitratified Layers (A5) (LRR F, G, H) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Red Parent Material (TF2) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Somethy Matrix (S8) Sandy Mucky Mineral (S1) Somethy Peat or Peat (S2) (LRR G, H) Somethy Peat or Peat (S2) (LRR G, H) Somethy Peat or Peat (S2) (LRR G, H) Somethy Peat or Peat (S3) (LRR F) Mucky Peat or Peat (S3) (LRR F) Mucky Peat or Peat (S3) (LRR F) Wetland Hydrology Indicators: HYDROLOGY Wetland Hydrology Indicators: Hydric Soil Present? Yes X No Remarks: HYDROLOGY Wetland Hydrology Indicators: Hydrica Water (A1) Saturation (A3) Hydrogen Sulfide Odor (C1) Saturation (A3) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation (Visible on Aerial Imagery (B7) Unional Hydrology (B7) Field Observations: Water Table Present? Yes No X Depth (Inches) Water Table Present? Yes No X Depth (Inches) Present? Water Table Present? Yes No X Depth (Inches) Present? Water Table Present? Water Table Present? Yes No X Depth (Inches) Present?	5-16	10 YR 4/2	95	2.5 YR 4/6	5	С	М	Sand		
Hydric Soil Indicators Histosol (A1) Histosol (A2) Histosol (A3) Histosol (A3) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) (LRR I, I) Coast Prairie Redox (A16) (LRR G, G, H) Black Histo (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR G) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Reduced Vertic (F18) Sandy Mucky Mineral (S1) Popleted Dark Surface (F6) Redox Certs (F18) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Some Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S3) (LRR F) More Restrictive Layer: (if observed) Type: Depth (inches): Hydric Soil Present? Yes No Remarks: HYDROLOGY Wetland Hydrology Indicators: Hydric Soil Present? Hydric Soil Present? Hydric Soil Present? Yes No X Depth (inches) Water Atlanta (B4) Saturation (A3) Hydrogen Sulfide Odor (C1) Darianage Patterns (B10) Crayfish Burrows (CB) Alagl Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (B7) No X Depth (inches) Water Asian Lawers (B9) Field Observations: Water Table Present? Yes No X Depth (inches) Water Table Present? Yes No X Depth (inches) Water Table Present? Yes More X Depth (inches) Water Table Present? Yes No X Depth (inches) Water Table Present? Yes No X Depth (inches) Presence (S5) Water Table Present?					_					
Hydric Soil Indicators Histosol (A1) Histosol (A2) Histosol (A3) Histosol (A3) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) (LRR I, I) Coast Prairie Redox (A16) (LRR G, G, H) Black Histo (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR G) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Reduced Vertic (F18) Sandy Mucky Mineral (S1) Popleted Dark Surface (F6) Redox Certs (F18) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Some Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S3) (LRR F) More Restrictive Layer: (if observed) Type: Depth (inches): Hydric Soil Present? Yes No Remarks: HYDROLOGY Wetland Hydrology Indicators: Hydric Soil Present? Hydric Soil Present? Hydric Soil Present? Yes No X Depth (inches) Water Atlanta (B4) Saturation (A3) Hydrogen Sulfide Odor (C1) Darianage Patterns (B10) Crayfish Burrows (CB) Alagl Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (B7) No X Depth (inches) Water Asian Lawers (B9) Field Observations: Water Table Present? Yes No X Depth (inches) Water Table Present? Yes No X Depth (inches) Water Table Present? Yes More X Depth (inches) Water Table Present? Yes No X Depth (inches) Water Table Present? Yes No X Depth (inches) Presence (S5) Water Table Present?					_		_			
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Histosol (A1) Histic Epipedon (A2) X Sandy Gleyed Matrix (S4) Listic Epipedon (A2) X Sandy Redox (S5) Coast Prairie Redox (A16) (LRR F, G, H) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F3) Tom Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Redox Dark Surface (F7) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Peat or Peat (S2) (LRR G, H) Loamy Below Expressions (F8) Type: Depleted Dark Surface (F7) Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) Type: Deplth (inches): Hydric Soil Present? Ves X No Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check ell that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Living Deposits (B3) Mydro Crust (B4) Presence of Reduced Iron (C4) Saturation (Visible on Aerial Imagery (B7) Other (Explain in Remarks) Wetland Hydrology (B1) Water Table (D2) Inon Deposits (B3) Thin Muck Surface (C7) Water Ack-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Field Observations: Surface Water Present? Yes No X Depth (Inches) Wetland Hydrology Present?	¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matr	ix, CS=Co	overed or Co	oated Sand Grains.	² Location: PL	=Pore Lining, M=Matrix	
Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR G) High Plains Depressions (F16) Stratified Layers (A5) (LRR F) Loamy Mucky Mineral (F1) High Plains Depressions (F16) [LRR H outside of MLRA 72 & 73) [LRR H outside of MLRA 72 & 73) Reduced Vertic (F18) Reduced Verti	Hydric Soil I	ndicators						Indicat	ors for Problematic Hydric S	Soils ³ :
Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR 6) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) (LRR H outside of MLRA 72 & 73) 1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F3) Reduced Vertic (F18) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Red Parent Material (TF2) Thick Dark Surface (A12) Depleted Dark Surface (F7) Other (Explain in Remarks) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer: (if observed) Type: Depth (inches): HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Sall Crust (B11) Surface Soil Cracks (B6) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Sediment Deposits (B2) Oxidezed Rhizospheres on Living Roots (C3) Water Marks (B1) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C1) Iron Deposits (B3) (Where not tilled) Water-Stained Leaves (B3) Frost-Heave Hummocks (D7) (LRR F) Field Observations: Surface Water Present? Yes No X Depth (inches) Wetland Hydrology Water Table Present? Yes No X Depth (inches) Wetland Hydrology Present?	Histo	sol (A1)			Sa	ndy Gleyed	Matrix (S4)		1 cm Muck (A9) (LRR I, J)	
Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) Loamy Mucky Mineral (F1) Stratified Layers (A5) (LRR F) Loamy Oleyed Matrix (F2) Loamy Oleyed Matrix (F2) (LRR H outside of MLRA 72 & 73) Reduced Vertic (F18) Reduced F18 Reduced Vertic (F18) Reduced Vertic (Histic	Epipedon (A2)			X Sa	ndy Redox ((S5)		Coast Prairie Redox (A16) (LI	RR F, G, H)
Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Red Parent Material (T82) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) Alindicators of hydrophylic vegetation and wetland hydrology must be present, unless disturbed or problematic. Serious Mucky Peat or Peat (S2) (LRR G, H) Type: Bepth (Inches): Hydric Soil Present? Wetland Hydrology Indicators: Hydric Soil Present? Water Marks (B1) Surface Water (A1) Saturation (A3) Hydrogen Sulfide Odor (C1) Sediment Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (C7) Water Stailer Leves (B9) Fired Observations: Surface Water Present? Yes No No Red Parent Material (T82) Redox Depleted Dark Surface (F6) Red Parent Matrix (F3) Redox Depressions (F6) Red Parent Matrix (F3) Redox Depleted Dark Surface (F7) Other (Explain in Remarks) **Indicators of hydrophylic vegetation and wetland hydrology must be present, unless disturbed or problematic. **Hydric Soil Present?** Yes No **Indicators of hydrophylic vegetation and wetland hydrology must be present, unless disturbed or problematic. **Hydric Soil Present?** **Primary Indicators (minimum of nor required) **Wetland Hydrology Indicators: **Hydric Soil Present?** Yes Saturation (A3) Hydric Soil Present?* Secondary Indicators (minimum of two required) **Hydric Soil Present?** **Present** **No **No **Redverter** **Indicators of hydrophylic vegetation and wetland hydrology Present?* **Present** **Indicators of hydrophylic vegetation and wetland hydrology Present?* **Present** **Indicators of hydrophylic vegetation and wetland hydrology Present?* **Indicators of hydrophylic vegetation and wetland hydrology Present?* **Present** **Indicators of hydrophylic vegetation and wetland hydrology Present?* **Indicators of hydrophylic vegetation and wetland hydrology Present?*	Black	Histic (A3)			Str	ripped Matrix	(S6)		Dark Surface (S7) (LRR G)	
1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Pepleted Dark Surface (A12) Pepleted Dark Surface (F7) Thick Dark Surface (A12) Pepleted Dark Surface (F7) Permitted Dark Surface (A12) Pepleted Dark Surface (F7) Pepleted Dark Surface (A12) Pepleted Dark Surface (F7) Pepleted Dark Surface (F6) Pepleted Dark Surface (F7) Pepleted Dark Surface (F6) Pepleted Dark Surface (F7) Pepleted Dark Surface (F7) Pepleted Dark Surface (F6) Pepleted Dark Surface (F7) Pepleted Dark Surface (F6) Pepleted Dark Surface (F6) Pepleted Dark Surface (F7) Pepleted Dark Surface (F6) Pepleted Dark Surface (F7) Pepleted Dark Surface (F6) Pepleted Dark S		-							High Plains Depressions (F16	5)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Mucky Mineral (S1) Pedox Depressions (F8) Aligh Plains Depressions (F8) Aligh Plains Depressions (F8) Aligh Plains Depressions (F16) Aligh Present? Aligh Plains Depressions (F16) Aligh Plains Depressions (F16) Aligh Plains Depressions (F16) Aligh Present? Aligh Plains Depressions (F16) Aligh Plains Depressions (F16) Aligh Present? Aligh Plains Depressions (F16) Aligh Plains Depr					Lo	amy Gleyed	Matrix (F2)		(LRR H outside of MLRA 7	2 & 73)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S2) Redox Depressions (F8) Peter or Peat (S2) (LRR G, H) Peter or Peat (S2) (LRR G, H) Peter or Peat (S3) (LRR F) MIgh Plains Depressions (F16) Sc m Mucky Peat or Peat (S3) (LRR F) MIGHAR 72 & 73 of LRR H) Wetland hydrology must be present, unless disturbed or problematic. Wetland hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology Water Table Present? Yes No No Wetland Hydrology A Depth (inches) Wetland Hydrology Present?										
Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) Bigh Plains Depressions (F8) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) Restrictive Layer: (if observed) Type: Depth (inches): Hydric Soil Present? Yes X No Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Sediment Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Thin Muck Surface (C7) A Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology Wetland Hydrology Present?							` ,			
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) High Plains Depressions (F16) wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer: (if observed) Type: Depth (inches): Hydric Soil Present? Yes X No Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Sulf Crust (B11) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Water Marks (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Drift Deposits (B3) (where not tilled) Crayfish Burrows (C8) Algal Mat Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (B7) Undation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR F) Field Observations: Surface Water Present? Yes No X Depth (inches) Wetland Hydrology Present?		,				•	()		Other (Explain in Remarks)	
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Wetland Determi	nation Da	ata Forn	ı - Grea	at Plains Re	egion		
Project/Site: I-25/I-80 Interchange	City/	County: Che	yenne/La	ramie	Sampling D	ate: 8/1/	2019
Applicant/Owner: Wyoming Dept. of Transportation			-	State: W	YY Sampling Po	oint: S-	-1F
Investigator(s): R. Newton, D. Soucy				Sect	 ion, Township, Range	e: S12 T13N R	67W
Landform (hillslope, terrace, etc.) depression	Lo	cal Relief <i>(co</i>	ncave, co	nvex, none):	minor concave	Slope (%	o): 0-1
Subregion (LRR): G - Western Great Plains	Lat.	2236	33.1128	Long	744801.2537	Datum:	WYE
Soil Map Unit Name: Merden silty clay loam, 0 to 3 percer	nt slopes				NWI Classification:	PEMA/F	PEMC
Are climatic/hydrologic conditions on the site typical for this	s time of year	? Yes	Х	No	- (If no, explain in Rei	marks)	
Are Vegetation , Soil , or Hydrology	significantly	disturbed? A	e "Norma	l Circumstance	es" present? Yes	X	No
Are Vegetation , Soil , or Hydrology	naturally pro				explain any answers		- —
	-		onoosto	,	, ,	III Nomarks.)	
SUMMARY OF FINDINGS - Attach site map showing sa	inping point	iocations, ti	ansecis,	important lea	itures, etc.		
Hydrophytic Vegetation Present? Yes X No	-						
Hydric Soil Present? Yes X No	=	Is the Sar	npled Are	a within a Wetl	and?	Yes X No	
Wetland Hydrology Present? Yes X No	=						
Remarks: NWI-mapped depressional palustrine emergent wetland PE	EM-1D. Area a	also includes	NHD-map	oped Clear Cre	ek, but no channel fe	atures are pres	sent.
VEGETATION - Use scientific names of plants.			•				
Absolute Tree Stratum (Plot size: 30x30 ft) % Cover	Dominant	Indicator		nce Test Wor of Dominant S			
	Species?	Status		or Dominant S e OBL, FACW,	•	4	(0)
1				ng FAC-):	OFFAC.	1	(A)
2							
3				Imber of Domii		4	(5)
4			Species	Across All Str	ala.	1	(B)
5	Total Cover						
	Total Cover			of Dominant S	•	4000/	(* (5)
Sapling/Shrub Stratum (Plot size: 15x15 ft)			That Are	e OBL, FACW,	or FAC:	100%	(A/B)
1			D	nce Index Wo	alada a st		
2			Prevale	Total % Cov		N A I + i o l	, b
3			OBL		0	Multiply x 1 =	0 0
4			FACW	species	100		00
5 0 =	Total Cover		FACW	species species	0	_	0
Herb Stratum (Plot size: 5x5 ft)	Total Covel		FACU	species	0	_	0
1. Phalaris arundinacea 100	Υ	FACW	UPL	species			0
2.		TACV	Column	•	100		00 (B)
3.			Column		valence Index = B/A		<u> </u>
4.			Hydron		on Indicators:		
			linguiop	-	Test for Hydrophytic	Vegetation	
					nance Test is >50%.	Vogetation	
					lence Index is <3.01		
8					nological Adaptations ¹	(Provide sup-	
9					lata in Remarks or on		
10.				Problem	atic Hydrophytic Vege	etation (Explair	n)
	Total Cover				ano riyaropriyno vogo	xation (Explain	•,
Woody Vine Stratum (Plot size: 30x30 ft)	10141 00101						
1.				1			
					ydric soil and wetland h disturbed or problema		be
2	= Total Cove			present, unless	disturbed of probleffid		
% Bare Ground in Herb Stratum 0 %	- Total Cove	51		Hydrophytic Ve	egetation Present?	XYes	No
Remarks:			<u> </u>				
inaina.							

SOIL Sampling Point: S-1F

1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Hydric Soil Indicators Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Redox Da 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 1 cm Mucky Plair	C M d or Coated Sand Graineyed Matrix (S4)	Silty Clay Sand 2Location: PL=Pore Lining, M= Indicators for Problemat 1 cm Muck (A9) (Li Coast Prairie Redo Dark Surface (S7) (High Plains Depres (LRR H outside of Reduced Vertic (F1) Red Parent Materi Other (Explain in R) 3Indicators of hydrophylio	cic Hydric Soils ³ : RR I, J) Ex (A16) (LRR F, G, H) (LRR G) Ssions (F16) Of MLRA 72 & 73) 18) ial (TF2) Remarks) c vegetation and be present, unless
0-5 10 YR 2/1 100 5-16 10 YR 4/2 97 2.5 YR 4/6 3 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Hydric Soil Indicators Histosol (A1) Sandy Gle Histic Epipedon (A2) X Sandy Re Black Histic (A3) Stripped N Stratified Layers (A5) (LRR F) Loamy Mi Stratified Layers (A5) (LRR F, G, H) Depleted Depleted Below Dark Surface (A11) Redox Da Thick Dark Surface (A12) Depleted Sandy Mucky Mineral (S1) Redox De 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plair 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 7) Restrictive Layer: (if observed) Type: Depth (inches):	C M d or Coated Sand Grain eyed Matrix (S4) edox (S5) Matrix (S6) ucky Mineral (F1) leyed Matrix (F2) Matrix (F3) ark Surface (F6) Dark Surface (F7) epressions (F8) as Depressions (F16)	Silty Clay Sand 2Location: PL=Pore Lining, M= Indicators for Problemat 1 cm Muck (A9) (Li Coast Prairie Redo Dark Surface (S7) (High Plains Depres (LRR H outside of Reduced Vertic (F1) Red Parent Materia Other (Explain in Red) 3Indicators of hydrophylic wetland hydrology must (f1)	:Matrix ic Hydric Soils ³ : RR I, J) ox (A16) (LRR F, G, H) (LRR G) ssions (F16) of MLRA 72 & 73) 18) ial (TF2) Remarks) c vegetation and be present, unless
1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Hydric Soil Indicators Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plair 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches):	eyed Matrix (S4) edox (S5) Matrix (S6) ucky Mineral (F1) leyed Matrix (F2) Matrix (F3) ark Surface (F6) Dark Surface (F7) epressions (F8) ns Depressions (F16)	Sand 2Location: PL=Pore Lining, M= Indicators for Problemat 1 cm Muck (A9) (Li Coast Prairie Redo Dark Surface (S7) (High Plains Depres (LRR H outside of Reduced Vertic (F1) Red Parent Materion (Parent Materion) Other (Explain in Reduced of Portion (Explain in Reduced	cic Hydric Soils ³ : RR I, J) Ex (A16) (LRR F, G, H) (LRR G) Ssions (F16) Of MLRA 72 & 73) 18) ial (TF2) Remarks) c vegetation and be present, unless
1Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered Hydric Soil Indicators Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plair 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches):	eyed Matrix (S4) edox (S5) Matrix (S6) ucky Mineral (F1) leyed Matrix (F2) Matrix (F3) ark Surface (F6) Dark Surface (F7) epressions (F8) ns Depressions (F16)	Indicators for Problemat Indicators for Problemat 1 cm Muck (A9) (Li Coast Prairie Redo Dark Surface (S7) (High Plains Depres (LRR H outside of Reduced Vertic (F1) Red Parent Materion Other (Explain in Red) 3 Indicators of hydrophylic wetland hydrology must (see Problemators)	cic Hydric Soils ³ : RR I, J) Ex (A16) (LRR F, G, H) (LRR G) Ssions (F16) Of MLRA 72 & 73) 18) ial (TF2) Remarks) c vegetation and be present, unless
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Hydric Soil Indicators Histosol (A1) Sandy Gle Histic Epipedon (A2) Stripped N Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) Loamy Gl 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plair 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches):	eyed Matrix (S4) edox (S5) Matrix (S6) ucky Mineral (F1) leyed Matrix (F2) Matrix (F3) ark Surface (F6) Dark Surface (F7) epressions (F8) ns Depressions (F16)	Indicators for Problemat 1 cm Muck (A9) (Li Coast Prairie Redo Dark Surface (S7) (High Plains Depres (LRR H outside of Reduced Vertic (F1) Red Parent Materi Other (Explain in R) Indicators of hydrophylic wetland hydrology must (P1)	cic Hydric Soils ³ : RR I, J) Ex (A16) (LRR F, G, H) (LRR G) Ssions (F16) Of MLRA 72 & 73) 18) ial (TF2) Remarks) c vegetation and be present, unless
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Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plair 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches):	edox (S5) Matrix (S6) ucky Mineral (F1) leyed Matrix (F2) Matrix (F3) ark Surface (F6) Dark Surface (F7) epressions (F8) ns Depressions (F16)	Coast Prairie Redo Dark Surface (S7) (High Plains Depres (LRR H outside of Reduced Vertic (F1) Red Parent Materi Other (Explain in R	ox (A16) (LRR F, G, H) (LRR G) ssions (F16) of MLRA 72 & 73) 18) ial (TF2) Remarks) c vegetation and be present, unless
Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) Loamy Mi Stratified Layers (A5) (LRR F) Loamy Gl 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Pedox De 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plair 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches):	Matrix (S6) ucky Mineral (F1) leyed Matrix (F2) Matrix (F3) ark Surface (F6) Dark Surface (F7) epressions (F8) ns Depressions (F16)	High Plains Depres (LRR H outside of Reduced Vertic (F1) Red Parent Materi Other (Explain in R) 3 Indicators of hydrophylio wetland hydrology must (s)	of MLRA 72 & 73) 18) ial (TF2) Remarks) c vegetation and be present, unless
Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches):	leyed Matrix (F2) Matrix (F3) ark Surface (F6) Dark Surface (F7) epressions (F8) ns Depressions (F16)	High Plains Depres (LRR H outside of Reduced Vertic (F1) Red Parent Materi Other (Explain in R) 3 Indicators of hydrophylio wetland hydrology must (s)	of MLRA 72 & 73) 18) ial (TF2) Remarks) c vegetation and be present, unless
Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) Thick Dark Surface (A12) Redox Depleted Redox Depleted Redox Depleted (MLRA 7) Restrictive Layer: (if observed) Type: Depth (inches):	leyed Matrix (F2) Matrix (F3) ark Surface (F6) Dark Surface (F7) epressions (F8) ns Depressions (F16)	(LRR H outside of Reduced Vertic (F1 Red Parent Materi Other (Explain in R	of MLRA 72 & 73) 18) ial (TF2) Remarks) c vegetation and be present, unless
1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Depleted Sandy Mucky Mineral (S1) Redox De 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plair 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches):	Matrix (F3) ark Surface (F6) Dark Surface (F7) epressions (F8) ns Depressions (F16)	Red Parent Materi Other (Explain in R	ial (TF2) Remarks) c vegetation and be present, unless
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches):	ark Surface (F6) Dark Surface (F7) epressions (F8) ns Depressions (F16)	Red Parent Materi Other (Explain in R	ial (TF2) Remarks) c vegetation and be present, unless
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches):	epressions (F8) ns Depressions (F16)	Other (Explain in R ³ Indicators of hydrophylic wetland hydrology must	Remarks) c vegetation and be present, unless
Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches):	epressions (F8) ns Depressions (F16)) wetland hydrology must	be present, unless
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 7) Restrictive Layer: (if observed) Type: Depth (inches):	ns Depressions (F16)) wetland hydrology must	be present, unless
5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 7 Restrictive Layer: (if observed) Type: Depth (inches):			
Type: Depth (inches):			
Type: Depth (inches):			
Depth (inches):			
<u> </u>			
Remarks:		Hydric Soil Present?	Yes X No
L HYDROLOGY			
Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of	two required)
Surface Water (A1) Salt Crust (B11	1)	Surface Soil C	Cracks (B6)
High Water Table (A2) Aquatic Fauna	(B13)	Sparsley Vegetat	ed Concave Surf. (B8)
Saturation (A3) Hydrogen Sulfi	de Odor (C1)	Drainage Patt	erns (B10)
Water Marks (B1) Dry-Season W	ater Table (C2)		ospheres on Living
Sediment Deposits (B2) Oxidized Rhizosp	oheres on Living Roots (0	C3) Roots (C3) (w	here tilled)
Drift Deposits (B3) (where not till	ed)	Crayfish Burro	ows (C8)
Algal Mat or Crust (B4) Presence of Re	educed Iron (C4)	Saturation Visib	le on Aerial Imagery (C9)
Iron Deposits (B5) Thin Muck Surf	face (C7)	X Geomorphic F	Position (D2)
Inundation Visible on Aerial Imagery (B7) Other (Explain	in Remarks)	X FAC-Neutral T	Γest (D5)
Water-Stained Leaves (B9)		Frost-Heave Hu	ımmocks (D7) (LRR F)
Field Observations:			
Surface Water Present? Yes No	X Depth (inches)) Wetl	and Hydrology
Water Table Present? Yes No	X Depth (inches)	<u> </u>	Present?
Saturation Present? (includes capillary fringe) Yes X No	Depth (inches)) surface X Y	res No
Remarks:			

Wetland I	Determinatio	n Data Forr	n - Great Plains	Region	
Project/Site: I-25/I-80 Interchange		City/County: Ch	eyenne/Laramie	Sampling D	ate: 7/30/2019
Applicant/Owner: Wyoming Dept. of Tra	insportation	· · · —	-	: WY Sampling Po	
Investigator(s): R. Newton, D. Soucy	•			ection, Township, Range	
Landform (hillslope, terrace, etc.): depress	sion	Local Relief (d	concave, convex, none	e): concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plai	ns	Lat. 222	261.9957 Lo	ong: 743534.4349	Datum: WY E
Soil Map Unit Name: Merden silty clay loam,	0 to 3 percent slope	es		NWI Classification:	UPL
Are climatic/hydrologic conditions on the site t	ypical for this time o	year? Ye	s X No	(If no, explain in Re	marks)
Are Vegetation , Soil , or Hyd	droloav sianifi	cantly disturbed?	Are "Normal Circumst	ances" present? Yes	X No
Are Vegetation , Soil , or Hyd		ally problematic?		ed, explain any answers	
SUMMARY OF FINDINGS - Attach site map					III Nemarks.)
·		point locations,	transects, important	leatures, etc.	
Hydrophytic Vegetation Present? Yes		0			
Hydric Soil Present? Yes	No_X_	is the S	ampled Area within a	Wetland?	Yes No X
Wetland Hydrology Present? Yes	X No				
Remarks:					
Depressional area with dominant hydrophytic v		nd hydrology but	lacking hydric soils.		
VEGETATION - Use scientific names of plan			In		_
Tree Stratum (Plot size: 30x30 ft)	Absolute Domir % Cover Speci		Dominance Test V Number of Domina		
1	70 GGVGI GPGGI	oo. Glatao	That Are OBL, FAC	•	1 (A)
2			(excluding FAC-):	,	
3			Total Number of De	minant	
4			Total Number of Do Species Across All		1 (B)
5.			oposios / torose / tir	oudia.	
	0 = Total (Cover			
Sapling/Shrub Stratum (Plot size: 15x1	5 ft)		Percent of Dominar That Are OBL, FAC	•	100% (A/B)
1	<u>- </u>		matric obe, tric	,, or 17.0.	(A/B)
2			Prevalence Index	Worksheet	
3.			Total % C		Multiply by:
4.			OBL species	0	x 1 = 0
5.			FACW species	97	x 2 = 194
	0 = Total (Cover	FAC species	0	x 3 = 0
Herb Stratum (Plot size: 5x5 ft)			FACU species	0	x 4 = 0
1. Distichlis spicata	80 Y	FACW	UPL species	3	x 5 = 15
2. Hordeum jubatum	17 N		Column Totals:	100	(A) 209 (B)
3. Bromus hordeaceus	3 N			Prevalence Index = B/A	
4.			Hydrophytic Vege		
5.		<u> </u>	' ' '	pid Test for Hydrophytic	Vegetation
6.		<u> </u>		minance Test is >50%.	3
7.				evalence Index is <3.01	
8.		<u> </u>		orphological Adaptations	(Provide sup-
9.		<u> </u>	portin	ig data in Remarks or on	a separate sheet)
10.		<u> </u>	Probl	ematic Hydrophytic Vege	etation (Explain)
	100 = Total (Cover		, , , ,	, ,
Woody Vine Stratum (Plot size: 30x30 f	<u> </u>				
1			1 Indicators	of hydric soil and wetland h	audralagu must ha
2				less disturbed or problema	
	0 = Tota	al Cover	p. 232, un	and the second second	
— — — — — — — — — — — — — — — — — — —			Hydrophyti	c Vegetation Present?	X Yes No
	· -		,		
Remarks:					
Transition of the state of the					

Sampling Point:

Profile Desc	pare (Beechee :						,	
Depth	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10 YR 2/1	97					Sandy Clay	
	10 YR 4/4	3					Sand	
3-7	10 YR 3/3	97	10 YR 5/8	3	С	М	Sand	
7-18	10 YR 5/2	100					Clay	
¹ Type: C=Co	oncentration, D=Dep	oletion. RM=	Reduced Matrix	. CS=Cove	ered or Coa	ated Sand Grains.	² Location: PL=F	Pore Lining, M=Matrix
Hydric Soil I		•		•				rs for Problematic Hydric Soils ³ :
_	sol (A1)			Sand	v Gleved N	Matrix (S4)		cm Muck (A9) (LRR I, J)
	Epipedon (A2)		•		y Redox (S			past Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		-		ed Matrix	,		ark Surface (S7) (LRR G)
	ogen Sulfide (A4)		-			Mineral (F1)		igh Plains Depressions (F16)
	ified Layers (A5) (LF	PR FI	-			Matrix (F2)	'''	(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	•	•		eted Matrix		D.	educed Vertic (F18)
	eted Below Dark Sur		•		x Dark Su			ed Parent Material (TF2)
	Dark Surface (A12)		-			Surface (F7)		ther (Explain in Remarks)
	` '	,	•		x Depress			, ,
	y Mucky Mineral (S [.] m Mucky Peat or Pe	•	BC H)		•	oressions (F16)		rs of hydrophylic vegetation and hydrology must be present, unless
		at (OZ) (Li	IX G , 11)	riigii	Liailis Del	Jiessions (F10)		
	-		E) .	/8/1	DA 72 9. 72	of IDD U\	disturbe	d or problematic.
	Mucky Peat or Pea		F)	(ML	.RA 72 & 73	of LRR H)	disturbe	d or problematic.
5 cm	-	t (S3) (LRR	F)	(ML	.RA 72 & 73	3 of LRR H)	disturbe	d or problematic.
5 cm	Mucky Peat or Pea	t (S3) (LRR	F)	(MI	RA 72 & 73	3 of LRR H)	disturbe	d or problematic.
5 cm	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR	F)	(ML	.RA 72 & 73	s of LRR H)	disturbe	
5 cm Restrictive I Type:	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR	F)	(ML	.RA 72 & 73	3 of LRR H)		
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR	F)	(ML	RA 72 & 73	3 of LRR H)		
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR	F)	(MI	RA 72 & 73	s of LRR H)		
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat Layer: (if observed) thes):	t (S3) (LRR	F)	(MI	RA 72 & 73	3 of LRR H)		
Festrictive I Type: Depth (inc.) Remarks:	Mucky Peat or Peat Layer: (if observed) thes):	t (S3) (LRR	F)	(MI	RA 72 & 73	3 of LRR H)		
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat Layer: (if observed) thes):	t (S3) (LRR			RA 72 & 73		Hydric Soil	
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat Layer: (if observed) shes): Y drology Indicators:	t (S3) (LRR	red; check all tha				Hydric Soil	Present? Yes No
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	Mucky Peat or Peat Layer: (if observed) thes): Ty drology Indicators: cators (minimum of cators)	t (S3) (LRR	red; check all tha	nt apply)	(B11)	S	Hydric Soil	Present? Yes No
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High	Mucky Peat or Peat Layer: (if observed) thes): Y drology Indicators: cators (minimum of o	t (S3) (LRR	red; check all tha	nt apply) Salt Crust	(B11) una (B13)	S	Hydric Soil	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High Satur	Mucky Peat or Peat Layer: (if observed) thes): drology Indicators: cators (minimum of object Water (A1) Water Table (A2)	t (S3) (LRR	red; check all tha	nt apply) Salt Crust Aquatic Fa	(B11) una (B13) Sulfide Od	Solor (C1)	Hydric Soil	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Mucky Peat or Peat Layer: (if observed) thes): drology Indicators: cators (minimum of cators (minimum of cators (Manimum of	t (S3) (LRR	red; check all tha	nt apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso	(B11) una (B13) Sulfide Od n Water T	Solor (C1)	Hydric Soil	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
5 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	Mucky Peat or Peat Layer: (if observed) thes): Ty drology Indicators: cators (minimum of of the cators (Minimum of of t	t (S3) (LRR	red; check all tha	nt apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso	(B11) una (B13) Sulfide Od n Water T izospheres	lor (C1)	Hydric Soil	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High Satur Wate Sedir Drift I	Mucky Peat or Peat Layer: (if observed) thes): drology Indicators: cators (minimum of of other of the other) water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2)	t (S3) (LRR	red; check all tha	nt apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh	(B11) una (B13) Sulfide Od n Water T izospheres t tilled)	lor (C1)	Hydric Soil	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	Mucky Peat or Peat Layer: (if observed) thes): ary drology Indicators: cators (minimum of observed) water (A1) Water Table (A2) ration (A3) ar Marks (B1) ment Deposits (B2) Deposits (B3)	t (S3) (LRR	red; check all tha	nt apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh	(B11) una (B13) Sulfide Od n Water Tizospheres t tilled) of Reducee	lor (C1) able (C2) on Living Roots (C3)	Hydric Soil	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Festrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I	Mucky Peat or Peat Layer: (if observed) Ches): GY drology Indicators: cators (minimum of of other other of other other of other other of other o	t (S3) (LRR	red; check all tha	at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no	(B11) una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce	lor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric Soil Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
5 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund	Mucky Peat or Peat Layer: (if observed) Shes): Grading Indicators: Cators (minimum of of other of other of other of other of other of other other of other other of other ot	t (S3) (LRR	red; check all tha	at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of	(B11) una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce	lor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric Soil Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Ca) Geomorphic Position (D2)
5 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund	Mucky Peat or Peat Layer: (if observed) Ches): Cy drology Indicators: Cators (minimum of observed) Water Table (A2) Cation (A3) Cator (A3)	t (S3) (LRR	red; check all tha	at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of	(B11) una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce	lor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric Soil Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Ca) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate	Mucky Peat or Peat Layer: (if observed) Ches): Cy drology Indicators: cators (minimum of observed) Action (A3)	t (S3) (LRR	red; check all tha	at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of Thin Muck Other (Exp	(B11) Juna (B13) Sulfide Od Nuter Tizospheres t tilled) of Reducee Surface (Colain in Red	lor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric Soil Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Ca) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Peat Layer: (if observed) Shes): Gradiology Indicators: Cators (minimum of of other of other of other of other of other of other other of other ot	t (S3) (LRR	red; check all tha	at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of Thin Muck Other (Exp	(B11) una (B13) Sulfide Od n Water T izospheres t tilled) of Reduced Surface (Golain in Red	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Hydric Soil Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Ca) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate Field Observ Surface Wate Water Table	Mucky Peat or Peat Layer: (if observed) Shes): Gradiology Indicators: Cators (minimum of of other of other of other of other of other of other other of other ot	t (S3) (LRR	red; check all that	at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of Thin Muck Other (Exp	(B11) una (B13) Sulfide Od n Water T. izospheres t tilled) of Reducee Surface (Colain in Red	lor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	Hydric Soil Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Ca) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F

Wetland Determinatio	n Data Form	- Great Plains Regio	on	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	7/30/2019
Applicant/Owner: Wyoming Dept. of Transportation	· · · · ·	State: WY	Sampling Point:	S-4
Investigator(s): R. Newton, D. Soucy		Section,	Township, Range: S1 1	1 T13N R67W
Landform (hillslope, terrace, etc.): pond	Local Relief (co.	ncave, convex, none):	concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	Lat. 22226	64.1156 Long:	743541.9372	Datum: WY E
Soil Map Unit Name: Merden silty clay loam, 0 to 3 percent slope	es	NV	VI Classification:	PEMA/PEMC
Are climatic/hydrologic conditions on the site typical for this time of	year? Yes	X No (If	no, explain in Remarks	s)
Are Vegetation , Soil , or Hydrology signifi	cantly disturbed? A	re "Normal Circumstances"	present? Yes	X No
Are Vegetation , Soil , or Hydrology natura	ally problematic?	(If needed, exp	lain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, tra	ansects, important feature	es, etc.	
Hydrophytic Vegetation Present? Yes X No				
Hydric Soil Present? Yes No	Is the Sar	mpled Area within a Wetland	d? Yes	No X
Wetland Hydrology Present? Yes X No			_	
Remarks:				
Area of open water (OW-1) within NWI-mapped PEM-1A.				
VEGETATION - Use scientific names of plants.				
Absolute Domin	nant Indicator	Dominance Test Worksh	eet:	
Tree Stratum (Plot size: 30x30 ft) % Cover Speci		Number of Dominant Spec		
1.		That Are OBL, FACW, or F	FAC:	1 (A)
2.		(excluding FAC-):		
3		Total Number of Dominant		
4		Species Across All Strata:		1 (B)
5				
0 = Total 0	Cover	Percent of Dominant Spec		
Sapling/Shrub Stratum (Plot size: 15x15 ft)		That Are OBL, FACW, or F	-AC:	100% (A/B)
<u></u>		Prevalence Index Worksi	hooti	
3.		Total % Cover o		Multiply by:
4		OBL species	4 x 1 =	
5.	<u> </u>	FACW species	0 x 2 =	
0 = Total 0	Cover	FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)		FACU species	0 x 4 =	0
1. Schoenoplectus tabernaemontani 4 Y	OBL	UPL species	0 x 5 =	0
2.		Column Totals:	4 (A)	4 (B)
3		Prevale	ence Index = B/A =	1.0
4		Hydrophytic Vegetation I		
5			st for Hydrophytic Vege	tation
6		X 2. Dominano		
<u></u>		X 3. Prevalence	e index is <u><</u> 3.0 [.] gical Adaptations¹ (Prov	vide sun-
8 9.			in Remarks or on a se	
10.		Problematic	Hydrophytic Vegetation	n (Explain)
4 = Total 0	Cover			, , ,
Woody Vine Stratum (Plot size: 30x30 ft)				
1.		¹ Indicators of hydric	c soil and wetland hydrol	ogy must be
2.			urbed or problematic.	·
<u></u>	al Cover			
% Bare Ground in Herb Stratum 96 %		Hydrophytic Vegeta	ation Present?	X Yes No
Remarks:				

Sampling Point:

S-4

	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
	·							
	·							
				-				
				-				
1- 0.0			5				21 11 12	5
	oncentration, D=Deple	etion, Rivi	=Reduced Matri	x, CS=Cove	ered or Coa	ted Sand Grains.		Pore Lining, M=Matrix
Hydric Soil I								ors for Problematic Hydric Soils ³ :
Histo	sol (A1)			Sand	ly Gleyed M	latrix (S4)	:	1 cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)			Sand	ly Redox (S	5)		Coast Prairie Redox (A16) (LRR F, G, H)
Black	(Histic (A3)			Strip	ped Matrix ((S6)	'	Dark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)			Loan	ny Mucky M	ineral (F1)	ا	High Plains Depressions (F16)
Strati	fied Layers (A5) (LRF	R F)		Loan	ny Gleyed M	latrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F, G	i, H)		Deple	eted Matrix	(F3)	1	Reduced Vertic (F18)
Deple	eted Below Dark Surfa	ace (A11)		Redo	ox Dark Surf	face (F6)	!	Red Parent Material (TF2)
Thick	Dark Surface (A12)			Depl	eted Dark S	urface (F7)		Other (Explain in Remarks)
Sand	y Mucky Mineral (S1)			Redo	x Depression	ons (F8)	³ Indicat	ors of hydrophylic vegetation and
2.5 cı	m Mucky Peat or Pea	t (S2) (LF	RR G, H)	High	Plains Dep	ressions (F16)	wetland	d hydrology must be present, unless
						-£1.DD 11)	disturb	ed or problematic.
5 cm	Mucky Peat or Peat ((S3) (LRR	? F)	(MI	LRA 72 & 73	OT LKK H)		•
		(S3) (LRR	R F) 	(M)	LRA 72 & 73	OT LKK H)		
Restrictive I	Mucky Peat or Peat (Layer: (if observed)	(S3) (LRR	R F) 	(MI	LRA 72 & 73	OT LKK H)		
Restrictive I	Layer: (if observed)	(S3) (LRR	R F) 	(M I	LRA 72 & 73	OT LKK H)	Hydric So	uil Present? Yes No
Restrictive I Type: Depth (inc	Layer: (if observed)	(S3) (LRR	R F) 	(MI	LRA 72 & 73	OT LKK H)	Hydric So	il Present? Yes No
Restrictive I Type: Depth (inc	Layer: (if observed)	(S3) (LRR	R F)	(MI	LRA 72 & 73	OT LKK H)	Hydric So	il Present? Yes No
Restrictive I Type: Depth (inc	Layer: (if observed)	(S3) (LRR	R F) 	(Mi	LRA 72 & 73	OT LKK H)	Hydric So	vil Present? Yes No
Restrictive I Type: Depth (inc Remarks: Soils not inve	Layer: (if observed) thes): estigated.	(S3) (LRR	R F)	(Mi	LRA 72 & 73	OT LKK H)	Hydric So	il Present? YesNo
Restrictive I Type: Depth (inc Remarks: Soils not inve	Layer: (if observed) thes): estigated.	(S3) (LRR	R F)	(MI	LRA 72 & 73	OT LKK H)	Hydric So	vil Present? Yes No
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG	Layer: (if observed) shes): estigated.				LRA 72 & 73			oil Present? Yes No
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyo Primary Indic	Layer: (if observed) ches): estigated. GY drology Indicators:							
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa	Layer: (if observed) ches): estigated. ey drology Indicators: cators (minimum of one			nat apply) Salt Crust				ors <i>(minimum of two required)</i> Surface Soil Cracks (B6)
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High	Layer: (if observed) ches): estigated. drology Indicators: cators (minimum of online Water (A1) Water Table (A2)			at apply) Salt Crust Aquatic Fa	(B11) auna (B13)	s		ors <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur	ches): estigated. estigated. ery drology Indicators: cators (minimum of online Water (A1) Water Table (A2) cation (A3)			nat apply) Salt Crust Aquatic Fa	(B11) auna (B13) Sulfide Odd	S or (C1)		ors <i>(minimum of two required)</i> Surface Soil Cracks (B6)
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate	ches): estigated. estigated. ertology Indicators: cators (minimum of one ace Water (A1) Water Table (A2) ert Marks (B1)			at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso	(B11) auna (B13) Sulfide Odd on Water Ta	Sor (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir	estigated. estigated. estigated. estigated. estigated. extra drology Indicators: cators (minimum of one of the orange Water (A1) Water Table (A2) estion (A3) er Marks (B1) ment Deposits (B2)			aat apply) Salt Crust Aquatic Fa Hydrogen Dry-Seasc	(B11) auna (B13) Sulfide Odo on Water Ta nizospheres o	S or (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I	ches): estigated. estigated. estigated. estigated. estigated. external formulation of one of the control			at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seasc Oxidized Rh	(B11) auna (B13) Sulfide Odo on Water Ta	or (C1) able (C2) on Living Roots (C3)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I Algal	estigated. estiga			at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized RH (where no	(B11) auna (B13) Sulfide Odo on Water Ta nizospheres o ot tilled) of Reduced	or (C1) sible (C2) on Living Roots (C3)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I Algal Iron I	ches): estigated. estigated.	ne is requi	ired; check all th	at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seasc Oxidized Rh (where no	(B11) auna (B13) Sulfide Odo on Water Ta nizospheres o ot tilled) of Reduced	or (C1) able (C2) an Living Roots (C3) I Iron (C4)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2)
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I Algal Iron I	ches): estigated. estigated.	ne is requi	ired; check all th	at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seasc Oxidized Rh (where no	(B11) auna (B13) Sulfide Odo on Water Ta nizospheres o ot tilled) of Reduced	or (C1) able (C2) an Living Roots (C3) I Iron (C4)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I Algal Iron I	ches): estigated. estigated.	ne is requi	ired; check all th	at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seasc Oxidized Rh (where no	(B11) auna (B13) Sulfide Odo on Water Ta nizospheres o ot tilled) of Reduced	or (C1) able (C2) an Living Roots (C3) I Iron (C4)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2)
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Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate	Layer: (if observed) ches): estigated. estigated. extractors (minimum of online Water (A1) Water Table (A2) eation (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aeria er-Stained Leaves (B9) vations:	ne is requi	red; check all th	at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rr (where no Presence Thin Muck Other (Exp	(B11) auna (B13) Sulfide Odo on Water Ta nizospheres o ot tilled) of Reduced a Surface (Coolain in Rem	or (C1) able (C2) an Living Roots (C3) I Iron (C4)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate	Layer: (if observed) ches): estigated. estigated. extra drology Indicators: cators (minimum of one of the observed) extra Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aerial er-Stained Leaves (B9) vations: er Present?	ne is requi	red; check all th	at apply) Salt Crust Aquatic Fa Hydrogen Dry-Seasc Oxidized Rh (where no Presence Thin Muck Other (Exp	(B11) auna (B13) Sulfide Odo on Water Ta nizospheres o ot tilled) of Reduced a Surface (Colain in Rem	or (C1) able (C2) on Living Roots (C3) I Iron (C4) c7) narks)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Applicant/Owner: Wyoning Dept. of Transportation State WY Sampling Point: S-SA Moresting for (s) Section, Township, Range S11 T3N R6TW S11 T3N R6TW Section, Township, Range S11 T3N R6TW Section, Township, Range S11 T3N R6TW Section, Township, Range S11	Wetland	Determin	ation Da	ata Form	า - Gre	at Plains Re	gion			
International part Present Pre	Project/Site: I-25/I-80 Interchange		City/	County: Che	eyenne/L	aramie	Sampling D)ate: 7	/30/2019	1
Local Relatif (conceive, convex, none); concave Stope (%); O-1	Applicant/Owner: Wyoming Dept. of Tr	ansportation				State: W	Y Sampling P	oint:	S-5A	
Solid Map Unit Name: Mercland ally clay Joans	Investigator(s): R. Newton, D. Soucy					Section	on, Township, Range	e: S11 T13	N R67W	
Soli Map Juhn Name Mercina sitily day loam, or loa 3 percent alopes May Classification: UPL	Landform (hillslope, terrace, etc.): depres	ssion	Lo	cal Relief <i>(cd</i>	ncave, c	onvex, none):	concave	Slope	e (%): <u>0-</u>	1
Associated Chydrologic conditions on the site typical for this time of year? Yes X No (If no. explain in Remarks) Asia Vegetation Soil on Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Ave Vegetation No. 501 on Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Interest Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Yes X No Is the Sampled Area within a Wetland? Yes X No Yes X No Is the Sampled Area within a Wetland? Yes X No Yes X No Is the Sampled Area within a Wetland? Yes X No Yes X No Yes X No Is the Sampled Area within a Wetland? Yes X No Yes X No Yes X No Yes X No Is the Sampled Area within a Wetland? Yes X No Yes X No Yes X No Yes X No Is the Sampled Area within a Wetland? Yes X No	Subregion (LRR): G - Western Great Pla	ins	Lat.	2219	57.4546	Long:	742860.6615	Date	um: WY F	E
Are Vegetation Soil Or Hydrology Significantly disturbed? Are Normal Circumstances* present? Yes X No	Soil Map Unit Name: Merden silty clay loam	, 0 to 3 percer	nt slopes				NWI Classification:		UPL	
SummarY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.	Are climatic/hydrologic conditions on the site	typical for this	time of year?	Yes	X	No	(If no, explain in Re	marks)		
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.	Are Vegetation , Soil , or Hy	drology	significantly	disturbed? A	re "Norm	al Circumstance	es" present? Yes		X No	
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.	Are Vegetation , Soil , or Hy	drology	naturally pro	blematic?		(If needed, o	explain any answers	in Remark	s.)	
Hydricophytic Vegetation Present? Yes X No Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Secretary Secretar	SUMMARY OF FINDINGS - Attach site map	showing san	npling point	locations, tr	ansects,	important feat	tures, etc.			
Remarks Sustain Person										
Remarks Sustain Person	Hvdric Soil Present? Yes	X No	-	Is the Sa	mpled Ar	ea within a Wet	land?	Yes X	No	
Remarks Superpressional palustrine emergent wetland PEM-2A.	<u> </u>		-		•					•
Depressional palustrine emergent wetland PEM-2A.			-							
	Remarks:									
Absolute Dominant Species Statum Plot size: 30x30 ft										
Number of Dominant Species	VEGETATION - Use scientific names of pla	ints.				_				
That Are OBL, FACW, or FAC: 2 (A) (excluding FAC): Total Number of Dominant Species Across All Strata: 2 (B) Sapiling/Shrub Stratum (Plot size: 15x15 ft) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/8) That Are OBL, FACW, or FAC: 100% (A/8) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/8) That Are OBL, FACW, or FAC: 100% (A/8) Prevalence Index Worksheet: Total % Cover of: Multiply by: OBL Species 40 x 1 = 40 FACW species 57 x 2 = 1114 FAC species 0 x 3 = 0 FACU species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 97 (A) 154 (B) Prevalence Index Ex	Troo Stratum (Plot aize: 20v20 ft)									
Containing FAC-1 Containing FAC-2 Containing	Tiee Stratum (Flot Size. 30x30 it)	% Cover	Species?	Status			•	2	,	/ ^ \
Total Number of Dominant Species Across All Strata: 2 (8) Comparison Comparis	1						or rac.		((Α)
Species Across All Strata: 2 (B)	2									
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)	4.							2	(/p\
D					Орсско	ACIOSS All Otle	na.		— '	(D)
Sapling/Shrub Stratum (Plot size: 15x15 ft) 1. 1. 1. 1. 1. 1. 1.	<u> </u>	=	Total Cover							
Prevalence Index Worksheet: Total % Cover of: Multiply by:	Sanling/Shruh Stratum (Plot size: 15y:							1000	% (^	/R)
Total % Cover of:	1	1511			macra	C OBE, I NOW,	011710.		// (//)	וטו
Total % Cover of:	2				Prevale	ence Index Wor	rksheet:			
OBL species 40 x 1 = 40	3.				1.000			Mult	iply by:	
FACW Species S7 x 2 = 114 FACW Species S7 x 3 = SW SPACW Species SW SW SW SW SW SW SW S	4.				OBL					_
Total Cover FAC species D x 3 = D	5.					•	57			•
Herb Stratum (Plot size: 5x5 ft) 1. Alopecurus pratensis 12		0 =	Total Cover			•	0	x 3 =	0	•
1. Alopecurus pratensis 2. Hordeum jubatum 3.5 Y FACW 3. Juncus balticus 4. Eleocharis palustris 4. In Rapid Test for Hydrophytic Vegetation X 2. Dominance Test is >50%. X 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 4. Eleocharis palustris 5. Eleocharis palustris 6. Eleocharis palustris 7. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. ### Morphytic Vegetation (Explain) ### Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. ### Hydrophytic Vegetation Present? ### Mydrophytic Vegetation Present? ### Myd	Herb Stratum (Plot size: 5x5 ft)					species	0		0	i
2. Hordeum jubatum 35 Y FACW 3. Juncus balticus 10 N FACW 4. Eleocharis palustris 40 Y OBL 4. Eleocharis palustris 5.		12	N	FACW		•	0		0	•
3. Juncus balticus 4. Eleocharis palustris 4. Eleocharis palustris 5.	2. Hordeum jubatum	35	Υ	FACW	Column	Totals:	97	(A)	154	(B)
A. Eleocharis palustris	3. Juncus balticus	10	N	FACW		Prev	valence Index = B/A			
X 2. Dominance Test is >50%. X 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5.	4. Eleocharis palustris	40	Y	OBL	Hydrop	hytic Vegetation	on Indicators:			
X 3. Prevalence Index is \(\leq 3.0^1 \)	5.					X 1. Rapid	Test for Hydrophytic	: Vegetation	l	
4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Problematic Hydrophytic Vegetation (Explain) 1.	6.					X 2. Domina	ance Test is >50%.			
porting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Problematic Hydrophytic Vegetation (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Bare Ground in Herb Stratum The porting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? X Yes No	7.					X 3. Prevale	ence Index is <3.01			
Problematic Hydrophytic Vegetation (Explain) 97 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1.	8.						•	•	•	
97 = Total Cover	9.					porting da	ata in Remarks or or	า a separate	sheet)	
Moody Vine Stratum (Plot size: 30x30 ft) 1.	0.					Problema	atic Hydrophytic Veg	etation (Exp	olain)	
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		97 =	Total Cover							
present, unless disturbed or problematic. 0 = Total Cover Bare Ground in Herb Stratum 3 % Hydrophytic Vegetation Present? X Yes No	Woody Vine Stratum (Plot size: 30x30	ft)								
0 = Total Cover 8 Bare Ground in Herb Stratum 3 % Hydrophytic Vegetation Present? X Yes No	1					¹ Indicators of hy	dric soil and wetland	hydrology m	ust be	
% Bare Ground in Herb Stratum 3 % Hydrophytic Vegetation Present? X Yes No	2					present, unless	disturbed or problema	atic.		
		0	= Total Cove	er				_		
Remarks:	% Bare Ground in Herb Stratum	3 %				Hydrophytic Ve	getation Present?	XY	es	No
Remarks:										
	Remarks:				•					

Sampling Point: S-5A

i)	Matrix			Redox I	Features			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10 YR 2/1	100			-		Clay	
6-15	10 YR 7/1	100					Clay	
¹ Type: C=Co	oncentration, D=Dep	letion. RM=	Reduced Matrix	. CS=Cov	ered or Co	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil I				,				ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sand	dv Gleved	Matrix (S4)		. cm Muck (A9) (LRR I, J)
	Epipedon (A2)		-		dy Redox (Coast Prairie Redox (A16) (LRR F, G, F
	Histic (A3)		-		ped Matrix	•		Park Surface (S7) (LRR G)
	ogen Sulfide (A4)		-		•	Mineral (F1)		ligh Plains Depressions (F16)
	fied Layers (A5) (LR	RF)	-			Matrix (F2)	<u> </u>	(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F ,	•	-		leted Matri			Reduced Vertic (F18)
	eted Below Dark Sur		-			ırface (F6)		Red Parent Material (TF2)
	Dark Surface (A12)		-			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S1		-		ox Depres			, ,
	m Mucky Peat or Pe		R G. H)		•	pressions (F16)		ors of hydrophylic vegetation and hydrology must be present, unless
	Mucky Peat or Peat		-			3 of LRR H)		ed or problematic.
				(T	
Restrictive L	_ayer: (if observed)							
Type:	, ,							
Type: Depth <i>(inc</i>	hes):						Hydric So	il Present? Yes X No
-	hes):						Hydric So	il Present? Yes X No
Depth (inc	hes):						Hydric So	il Present? Yes X No
Depth (inc							Hydric So	il Present? Yes X No
Depth (inc	Y						Hydric So	il Present? Yes X No
Depth (inc Remarks: HYDROLOG Wetland Hyd	Y drology Indicators:	ne is requir	ed; check all tha	nt apply)		s		
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	Y drology Indicators: eators (minimum of o	ne is requir			t (B11)	s		rs (minimum of two required)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	Y drology Indicators: eators (minimum of o	ne is requir	X	Salt Crust	` '			rs <i>(minimum of two required)</i> _Surface Soil Cracks (B6)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	Y drology Indicators: cators (minimum of o	ne is requin	X	Salt Crust Aquatic F	auna (B13)		rs <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Y drology Indicators: cators (minimum of	ne is requin	<u>x</u>	Salt Crust Aquatic F Hydrogen	auna (B13 Sulfide O) dor (C1)		rs <i>(minimum of two required)</i> _Surface Soil Cracks (B6)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Y drology Indicators: cators (minimum of	ne is requin	<u>x</u>	Salt Crust Aquatic F Hydrogen Dry-Seaso	auna (B13 Sulfide Oo on Water) dor (C1) Fable (C2)	econdary Indicato	rs <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin	Y drology Indicators: cators (minimum of	ne is requin	<u>x</u>	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized R	auna (B13 Sulfide Oo on Water T) dor (C1)	econdary Indicato	rs <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I	Y drology Indicators: cators (minimum of	ne is requin	<u>x</u>	Salt Crust Aquatic F Hydrogen Dry-Seaso Oxidized R (where no	auna (B13 Sulfide Ocon Water Thizospheres) dor (C1) 「able (C2) on Living Roots (C3)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8)
Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indico Surfa High Satur Wate Sedin Drift I Algal	Y drology Indicators: cators (minimum of	ne is requir	<u>x</u>	Salt Crust Aquatic F. Hydrogen Dry-Sease Oxidized Ri (where no	auna (B13 Sulfide Ocon Water Thisospheres of tilled) of Reduce	dor (C1) Fable (C2) on Living Roots (C3) d Iron (C4)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [Algal Iron [Y drology Indicators: cators (minimum of		<u>x</u>	Salt Crust Aquatic F. Hydrogen Dry-Sease Oxidized R (where no Presence Thin Mucl	auna (B13 Sulfide Ocon Water Thizospheres of tilled) of Reduce	dor (C1) Fable (C2) on Living Roots (C3) and Iron (C4) (C7)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2)
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Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate	Y drology Indicators: cators (minimum of	ial Imagery (<u>x</u>	Salt Crust Aquatic F. Hydrogen Dry-Sease Oxidized R (where no Presence Thin Mucl	auna (B13 Sulfide Ocon Water Thizospheres of tilled) of Reduce	dor (C1) Fable (C2) on Living Roots (C3) and Iron (C4) (C7)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate Field Observ	Y drology Indicators: cators (minimum of	ial Imagery (X ————————————————————————————————————	Salt Crust Aquatic F. Hydrogen Dry-Sease Oxidized Ri (where ne Presence Thin Mucl Other (Ex	auna (B13 Sulfide Ocon Water Thizospheres of tilled) of Reduce & Surface (plain in Re	dor (C1) Fable (C2) on Living Roots (C3) od Iron (C4) (C7) emarks)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR
Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indico Surfa High Satur Wate Sedin Drift [Algal Iron [Inund Wate Field Observ Surface Wate	Y drology Indicators: cators (minimum of of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aeri r-Stained Leaves (B vations: er Present?	ial Imagery ((B7) X	Salt Crust Aquatic Fa Hydrogen Dry-Sease Oxidized Ri (where no Presence Thin Mucl Other (Ex	auna (B13 Sulfide Ocon Water Thizospheres of tilled) of Reduce of Surface (plain in Re	dor (C1) Table (C2) on Living Roots (C3) and Iron (C4) (C7) amarks) Depth (inches)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR
Depth (ince Remarks: HYDROLOG Wetland Hyd Primary Indice Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate Field Observ Surface Wate Water Table	Y drology Indicators: cators (minimum of of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aeri r-Stained Leaves (B vations: er Present?	ial Imagery (9)	(B7) Yes	Salt Crust Aquatic Fa Hydrogen Dry-Sease Oxidized Ri (where no Presence Thin Mucl Other (Ex	auna (B13 Sulfide Ocon Water Thizospheres of tilled) of Reduce & Surface (plain in Re	dor (C1) Fable (C2) on Living Roots (C3) od Iron (C4) (C7) emarks)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR

Wetland D	etermination	Data Forr	n - Great I	Plains Regio	on		
Project/Site: I-25/I-80 Interchange		City/County: Ch	eyenne/Laraı	mie	Sampling Da	ite: 7/30/	2019
Applicant/Owner: Wyoming Dept. of Trans	sportation			State: WY	Sampling Poi	int: S-	5B
Investigator(s): R. Newton, D. Soucy				Section,	Township, Range:	S11 T13N R6	67W
Landform (hillslope, terrace, etc.): depression	on	Local Relief (c	oncave, conv	ex, none):	concave	Slope (%)): 0-1
Subregion (LRR): G - Western Great Plains	3	Lat. 222	2042.883	Long:	742982.0346	Datum:	WYE
Soil Map Unit Name: Merden silty clay loam, 0	to 3 percent slopes	·		NV	VI Classification:	PEMA/P	PEMC
Are climatic/hydrologic conditions on the site typ	ical for this time of	year? Ye	s X	No (If	no, explain in Rem	narks)	
Are Vegetation , Soil , or Hydro	ology signific	antly disturbed?	Are "Normal C	Circumstances"	present? Yes	Х	No
Are Vegetation , Soil , or Hydro		ly problematic?			Ilain any answers i	n Remarks.)	
SUMMARY OF FINDINGS - Attach site map sl						,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Hydrophytic Vegetation Present? Yes X		omit rocations,	irunocoto, iin	portunt routure	33, 010.		
Hydric Soil Present? Yes X		la tha S	ampled Area i	within a Wetland	42 V	Yoo V No	
'	_	15 1116 3	ampieu Area v	within a vvetiani	ur t	es X No	
Wetland Hydrology Present? Yes X	No						
Remarks:							
Depressional palustrine emergent wetland PEM-	-2B, including an NV	VI-mapped PEM	wetland.				
VEGETATION - Use scientific names of plants	s.						
	Absolute Domina			e Test Worksh			
Tree Stratum (Plot size: 30x30 ft)	% Cover Species	s? Status		Dominant Spec			
1			(excluding	BL, FACW, or F <i>FAC-</i>)	-AC:	1	(A)
2				,			
3				er of Dominant		4	(5)
4			Species Ac	ross All Strata:		1	(B)
5	0 = Total Co						
Conline (Chrish Stratum (Diet eize) 45:45		ovei		Dominant Spec		4000/	(A /D)
Sapling/Shrub Stratum (Plot size: 15x15	π_)		I nat Are O	BL, FACW, or F	-AC:	100%	(A/B)
1			Dususlanas	. In day Manical	h4.		
				e Index Worksl otal % Cover o		Multiply	, by
3				ecies	-	x 1 = 0	
5.				ecies		x 2 = 16	
] ^{3.}	0 = Total Co			ecies		$\frac{x^2 - \frac{10}{100}}{x^3 - \frac{10}{100}}$	
Herb Stratum (Plot size: 5x5 ft)		ovei	1	ecies		x 4 = 0	
1. Hordeum jubatum	70 Y	FACW		ecies		5 = C	
2. Distichlis spicata	12 N	FACW	Column Tot			(A) 17	
3. Sporobolus airoides	5 N	FAC	Oolullii 10		ence Index = B/A =		(6)
4.			Hydronhyt	ic Vegetation I			
5.			-	_	st for Hydrophytic \	/egetation	
6.		_	-		ce Test is >50%.	ogotatio	
7.					e Index is <3.01		
8.			<u> </u>		gical Adaptations¹	(Provide sup-	
9.			_		in Remarks or on		eet)
10.				Problematic	Hydrophytic Veget	ation (Explain	1)
	87 = Total Co	over	_		, , , ,	` '	,
Woody Vine Stratum (Plot size: 30x30 ft)						
1.	_′		1 _{In}	dicators of hydric	c soil and wetland hy	idrology must h	20
2.					urbed or problemati		<i>T</i> C
	0 = Total	Cover	Pic	,	p. p. comunication		
% Bare Ground in Herb Stratum 13	%		Hv	drophytic Veget	ation Present?	X Yes	No
				, ,		 -	
Remarks:							

S-5B

Sampling Point:

	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10 YR 5/3	100					Loam	
2-17	10 YR 2/2	90	_				Clay	
	10 YR 5/3	10					Clay	
¹ Type: C=Co	oncentration, D=De _l	pletion, RM=	Reduced Matrix,	CS=Cover	ed or Coa	ited Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil	Indicators						Indicato	ors for Problematic Hydric Soils ³ :
Histo	sol (A1)			Sandy	Gleyed M	latrix (S4)	1	L cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)		_	Sandy	Redox (S	55)		Coast Prairie Redox (A16) (LRR F, G, H
Black	(Histic (A3)		_	Strippe	ed Matrix ((S6)		Dark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)		_	Loamy	Mucky M	lineral (F1)		High Plains Depressions (F16)
Strati	ified Layers (A5) (LF	RR F)	_	Loamy	Gleyed N	//atrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F,	G , H)	_	Deplet	ed Matrix	(F3)	F	Reduced Vertic (F18)
Deple	eted Below Dark Su	rface (A11)	_	Redox	Dark Sur	face (F6)		Red Parent Material (TF2)
Thick	Dark Surface (A12	:)	_	 Deplet	ed Dark S	Surface (F7)	X	Other (Explain in Remarks)
Sand	y Mucky Mineral (S	1)	_	Redox	Depressi	ons (F8)	3Indicat	ors of hydrophylic vegetation and
			RG H)	— High P	Plains Dep	ressions (F16)		hydrology must be present, unless
2.5 c	m Mucky Peat or Pe	eat (52) (LRI						
	m Mucky Peat or Pea Mucky Peat or Pea		_		RA 72 & 73	of LRR H)	disturbe	ed or problematic.
5 cm	Mucky Peat or Pea	at (S3) (LRR	_		RA 72 & 73	of LRR H)	disturbe	ed or problematic.
5 cm	-	at (S3) (LRR	_		RA 72 & 73	of LRR H)	disturbe	ed or problematic.
5 cm Restrictive I Type:	Mucky Peat or Pea	at (S3) (LRR	_		RA 72 & 73	of LRR H)		
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Pea	at (S3) (LRR	_		RA 72 & 73	of LRR H)		il Present? Yes X No
5 cm Restrictive I Type: Depth (incompress) Remarks:	Mucky Peat or Pea Layer: (if observed) ches):	at (S3) (LRR	F)	(MLR			Hydric So	il Present? Yes X No
Festrictive I Type: Depth (inc.) Remarks: Dominant hy	Mucky Peat or Pea Layer: (if observed) ches):	nt (S3) (LRR	F)	(MLR			Hydric So	
5 cm Restrictive I Type: Depth (incompleted) Remarks: Dominant hy features likel	Mucky Peat or Pea Layer: (if observed) thes): drophytic vegetation y masked, per Grea	nt (S3) (LRR	F)	(MLR			Hydric So	il Present? Yes X No
Festrictive I Type: Depth (inc Remarks: Dominant hy features likel	Mucky Peat or Pea Layer: (if observed) thes): drophytic vegetation y masked, per Grea	n and wetland	F)	(MLR			Hydric So	il Present? Yes X No
Restrictive I Type: Depth (inc Remarks: Dominant hy features likel HYDROLOG Wetland Hyd	Mucky Peat or Pea Layer: (if observed) ches): drophytic vegetation y masked, per Grea	n and wetland t Plains Reg	d hydrology indicational Supplemen	(MLR		ar landscape posit	Hydric So	il Present? Yes X No
Femary Indice	Mucky Peat or Pea Layer: (if observed) ches): drophytic vegetation y masked, per Great Y drology Indicators	n and wetland t Plains Reg	d hydrology indicagional Supplemen	(MLR	ent. Similia	ar landscape posit	Hydric So	il Present? Yes X No_pH 8.02 (strongly alkaline) - redox
Restrictive I Type: Depth (inc Remarks: Dominant hy features likel HYDROLOG Wetland Hyd Primary Indic	Mucky Peat or Pea Layer: (if observed) ches): drophytic vegetation by masked, per Great Gry drology Indicators cators (minimum of controls)	n and wetland t Plains Reg	d hydrology indicagional Supplementated; check all that	(MLR ators present.	ent. Similia	ar landscape posit	Hydric So	il Present? Yes X No ph 8.02 (strongly alkaline) - redox
Restrictive I Type: Depth (inco Remarks: Dominant hy features likel HYDROLOG Wetland Hyd Primary Indic Surfa High	Mucky Peat or Pea Layer: (if observed) ches): drophytic vegetation by masked, per Great iY drology Indicators cators (minimum of o	n and wetland t Plains Reg	d hydrology indicational Supplement sed; check all that	(MLR ators present.	ent. Similia B11) una (B13)	ar landscape posit	Hydric So	il Present? Yes X No pH 8.02 (strongly alkaline) - redox rs (minimum of two required) Surface Soil Cracks (B6)
Restrictive I Type: Depth (inc Remarks: Dominant hy features likel HYDROLOG Wetland Hyd Primary India Surfa High Satur	Mucky Peat or Pea Layer: (if observed) ches): drophytic vegetation y masked, per Great y masked, per Great Y drology Indicators cators (minimum of once Water (A1) Water Table (A2)	n and wetland t Plains Reg	d hydrology indicagional Supplementaries; check all that	(MLR ators prese t. apply) alt Crust (I	ent. Similia B11) una (B13) Sulfide Odd	ar landscape posit S or (C1)	Hydric So	il Present? Yes X No pH 8.02 (strongly alkaline) - redox rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Livin
Restrictive I Type: Depth (inc Remarks: Dominant hy features likel HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Mucky Peat or Pea Layer: (if observed) ches): drophytic vegetation by masked, per Great ary drology Indicators cators (minimum of actors (minimum of actors (Marianum of Actors (Mari	n and wetland t Plains Reg	d hydrology indicational Supplement red; check all that X S A L C	ators preset. apply) alt Crust (I quatic Fau	ent. Similia B11) una (B13) sulfide Odo i Water Ta	ar landscape posit S or (C1)	Hydric So	il Present? Yes X No pH 8.02 (strongly alkaline) - redox rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Femary Indices Sedire Sedires Sedires Section 1 Section 2 Sedires Section 2	Mucky Peat or Pea Layer: (if observed) ches): drophytic vegetation by masked, per Great Greators (minimum of observed) actors (minimum of observed) water (A1) Water Table (A2) ration (A3) er Marks (B1)	n and wetland t Plains Reg	d hydrology indicagional Supplement X S A A A A A A A A A A A A A A A A A A	ators preset. apply) alt Crust (I quatic Fau	ent. Similia B11) una (B13) sulfide Odo u Water Ta	ar landscape posit S or (C1) able (C2)	Hydric So	il Present? Yes X No pH 8.02 (strongly alkaline) - redox rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Livin
Restrictive I Type: Depth (inc Remarks: Dominant hy features likel HYDROLOG Wetland Hyo Primary Indic Surfa High Satur Wate Sedir Drift	Mucky Peat or Pea Layer: (if observed) ches): drophytic vegetation by masked, per Great drology Indicators cators (minimum of action (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2)	n and wetland t Plains Reg	d hydrology indicational Supplement of the control	ators present. apply) alt Crust (Indicate Fause) altydrogen Sery-Season	B11) una (B13) ula (B13) ula (B13) ula (B13) ula (B13) ula (B13) ula (B13)	ar landscape positions of (C1) able (C2) on Living Roots (C3)	Hydric So	il Present? Yes X No pH 8.02 (strongly alkaline) - redox rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Livin Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive I Type: Depth (inc Remarks: Dominant hy features likel HYDROLOG Wetland Hy Primary Indic Surfa High Satur Wate Sedir Drift I X Algal	Mucky Peat or Pea Layer: (if observed) ches): drophytic vegetation by masked, per Great art drology Indicators cators (minimum of actors (minimum of actors (Masked)) article (A2) ration (A3) art Marks (B1) ment Deposits (B2) Deposits (B3)	n and wetland t Plains Reg	d hydrology indicational Supplement X S A H	ators present. apply) alt Crust (I quatic Fau lydrogen Season widized Rhiz where not tresence of	B11) una (B13) ula (B13) u	ar landscape posit S or (C1) able (C2) on Living Roots (C3)	Hydric So	il Present? Yes X No pH 8.02 (strongly alkaline) - redox rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Livin Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery
Restrictive I Type: Depth (inc Remarks: Dominant hy features likel HYDROLOG Wetland Hy Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I	Mucky Peat or Pea Layer: (if observed) Ches): drophytic vegetation by masked, per Great actors (minimum of observed) water (A1) Water Table (A2) ration (A3) ar Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	n and wetland the Plains Reg	d hydrology indicational Supplement X S A E C C C ((ators present. apply) alt Crust (Inquatic Faurelly) lydrogen Sorry-Season widized Rhizente not	B11) una (B13) sulfide Odo t Water Ta cospheres o tilled) f Reduced Surface (C	ar landscape position (C1) able (C2) an Living Roots (C3) I Iron (C4)	Hydric So tion as S-5A. Soil econdary Indicato	il Present? Yes X No pH 8.02 (strongly alkaline) - redox rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Livin Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery
Femarks: Dominant hy features likel HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inunc	Mucky Peat or Pea Layer: (if observed) Ches): drophytic vegetation y masked, per Great Greators (minimum of the Water (A1) Water Table (A2) reation (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	n and wetland the Plains Reg	d hydrology indicational Supplement X S A E C C C ((ators present. apply) alt Crust (I quatic Fau lydrogen S bry-Season ixidized Rhiz where not dresence of hin Muck S	ent. Similia B11) una (B13) sulfide Odo n Water Ta cospheres o tilled) f Reduced Surface (C	ar landscape position (C1) able (C2) an Living Roots (C3) I Iron (C4)	Hydric So tion as S-5A. Soil econdary Indicato	il Present? Yes X No pH 8.02 (strongly alkaline) - redox res (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Livin Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2)
Festrictive I Type: Depth (inc) Remarks: Dominant hy features likel HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inunc	Mucky Peat or Pea Layer: (if observed) ches): drophytic vegetation by masked, per Great actors (minimum of actors (minimum of actors (minimum of actors (Masked)) actors (Masked) actors (Minimum of actors (Masked)) actors (Masked) actors	n and wetland the Plains Reg	d hydrology indicational Supplement X S A E C C C ((ators present. apply) alt Crust (I quatic Fau lydrogen S bry-Season ixidized Rhiz where not dresence of hin Muck S	ent. Similia B11) una (B13) sulfide Odo n Water Ta cospheres o tilled) f Reduced Surface (C	ar landscape position (C1) able (C2) an Living Roots (C3) I Iron (C4)	Hydric So tion as S-5A. Soil econdary Indicato	il Present? Yes X No pH 8.02 (strongly alkaline) - redox rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Livin Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc) Remarks: Dominant hy features likel HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inunc	Mucky Peat or Pea Layer: (if observed) ches): drophytic vegetation by masked, per Great art drology Indicators cators (minimum of action (A3) art Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aeter-Stained Leaves (E	n and wetland the Plains Reg	d hydrology indicational Supplement X S A E C C C ((ators present. apply) alt Crust (I quatic Fau lydrogen S bry-Season ixidized Rhiz where not dresence of hin Muck S	ent. Similia B11) una (B13) Sulfide Odo i Water Ta cospheres o tilled) f Reduced Surface (C ain in Rem	ar landscape position (C1) able (C2) an Living Roots (C3) I Iron (C4)	Hydric So tion as S-5A. Soil econdary Indicato	il Present? Yes X No pH 8.02 (strongly alkaline) - redox rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Livin Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc Remarks: Dominant hy features likel HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inunc Wate	Mucky Peat or Pea Layer: (if observed) ches): drophytic vegetation y masked, per Great Y drology Indicators: cators (minimum of the Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer er-Stained Leaves (Evations: er Present?	n and wetland the Plains Reg	d hydrology indicational Supplement X S A H C C (N M C C C C C C C C C C C C C C C C C C	ators present. apply) alt Crust (I quatic Fau lydrogen S lry-Season xidized Rhiz where not resence of hin Muck S bther (Explain	ent. Similia B11) una (B13) sulfide Odo t Water Ta cospheres o tilled) f Reduced Surface (C ain in Ren	or (C1) able (C2) on Living Roots (C3) I Iron (C4) c7) narks)	Hydric So tion as S-5A. Soil econdary Indicato	il Present? Yes X No pH 8.02 (strongly alkaline) - redox rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Livin Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR

Wetland	Determin	ation Da	ata Forr	n - Grea	t Plains Regio	on		
Project/Site: I-25/I-80 Interchange		City/	/County: Ch	eyenne/La	ramie	Sampling Date	e: 7/30/2	2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation				State: WY	Sampling Poin	it: S-	6
Investigator(s): R. Newton, D. Soucy					Section,	Township, Range: \$	S11 T13N R6	57W
Landform (hillslope, terrace, etc.): minor	terrace	Lo	cal Relief <i>(c</i>	oncave, co	nvex, none): r	none _	Slope (%)): 0-1
Subregion (LRR): G - Western Great Pla	ains	Lat.	. 2219	964.0318	Long:	742865.0514	Datum: \	WYE
Soil Map Unit Name: Merden silty clay loam	ı, 0 to 3 percer	nt slopes			NW	/I Classification:	UPL	-
Are climatic/hydrologic conditions on the site	typical for this	time of year?	? Ye	s X	No (If I	no, explain in Rema	irks)	
Are Vegetation , Soil , or Hy	/drology	significantly	disturbed?	Are "Norma	al Circumstances"	present? Yes	Х	No
Are Vegetation , Soil , or Hy	/drology	naturally pro	blematic?		(If needed, expl	lain any answers in	Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing san	- npling point	locations, 1	ransects,	important feature	s, etc.		
Hydrophytic Vegetation Present? Yes	No X			<u> </u>	•	•		
Hydric Soil Present? Yes	No X	•	Is the Sa	ampled Are	ea within a Wetland	i? Ye	es No	X
Wetland Hydrology Present? Yes	No X	-						
Remarks:		-						
Paired upland point for PEM-2.								
VEGETATION - Use scientific names of pla	ints.							
	Absolute	Dominant	Indicator		nce Test Worksho			
Tree Stratum (Plot size: 30x30 ft)	% Cover	Species?	Status		of Dominant Spec			
1					· OBL, FACW, or F ng FAC-):	-AC:	1	(A)
2				ľ	,			
J					mber of Dominant Across All Strata:		2	(B)
5.				Орослос	, toroco , til otrata.	_		_ (5)
	0 =	Total Cover		Doroont	of Dominant Coosi			
<u>Sapling/Shrub Stratum</u> (Plot size: 15x	15 ft)				of Dominant Speci OBL, FACW, or F		50%	(A/B)
1.						-		_```
2.				Prevale	nce Index Worksh	neet:		
3.					Total % Cover o	f:	Multiply	by:
4.				OBL	species	0 x	1 = 0	
5.				FACW	species	8 x	2 = 16	6
	0 =	Total Cover		FAC	species		3 = 15	0
Herb Stratum (Plot size: 5x5 ft)					species	10 x	4 = 40	<u>)</u>
Sporobolus airoides	50	Υ	FAC		species		5 = 15	
2. Bromus hordeaceus	25	<u> </u>	UPL	Column			A) 35	66 (B)
3. <u>Tragopogon dubius</u>	5	N	NI			nce Index = B/A =	3.6	
4. Hordeum jubatum	8	N	FACW	Hydroph	nytic Vegetation I			
5. Thlaspi arvense	10	<u>N</u>	FACU			t for Hydrophytic Ve	getation	
6.						e Test is >50%.		
7						e Index is <u><</u> 3.0¹ gical Adaptations¹ (F	Provido cun	
8						in Remarks or on a		eet)
9					· -	Hydrophytic Vegeta		
	98 =	Total Cover			I TODIEITIALIC	Trydrophylic vegeta	tion (Explain)	,
Woody Vine Stratum (Plot size: 30x30		rotal covol						
1					1 Indicators of budgie	soil and wetland hyd	tralagu must h	
2.						urbed or problematic		е
-	0	= Total Cove	er		,	, , ,		
% Bare Ground in Herb Stratum	2 %				Hydrophytic Vegeta	ation Present?	Yes	X No
Remarks:				1				
Species with no indicator (NI) are treated as	JPL for this an	alysis.						

Sampling Point:

S-6

	Matrix			Redox Fea	atures			
(inches)	Color (moist)	% (Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	10 YR 3/2	100					Clay Loam	
	-							
								_
								-
	-							
Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, (CS=Covere	ed or Coate	ed Sand Grains.	² Location: PL:	=Pore Lining, M=Matrix
Hydric Soil I	ndicators						Indicat	ors for Problematic Hydric Soils ³ :
Histo:	sol (A1)			Sandy	Gleyed Ma	itrix (S4)		1 cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)			Sandy	Redox (S5)		Coast Prairie Redox (A16) (LRR F, G, H)
Black	Histic (A3)			Strippe	d Matrix (S	86)		Dark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)			Loamy	Mucky Mir	neral (F1)		High Plains Depressions (F16)
Strati	fied Layers (A5) (LRI	R F)		Loamy	Gleyed Ma	atrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F, C	3 , H)		Deplete	ed Matrix (F3)	_	Reduced Vertic (F18)
Deple	eted Below Dark Surf	ace (A11)		Redox	Dark Surfa	ice (F6)		Red Parent Material (TF2)
Thick	Dark Surface (A12)		_	 Deplete	ed Dark Su	rface (F7)		Other (Explain in Remarks)
Sand	y Mucky Mineral (S1))	_	Redox	Depressio	ns (F8)	3Indica	tors of hydrophylic vegetation and
2.5 cr	m Mucky Peat or Pea	at (S2) (LRR	G , H)	High Pl	ains Depre	essions (F16)		d hydrology must be present, unless
	Maralan Brook on Brook	(00) (I DD E)		(MIR	A 72 & 73 o	f LRR H)	disturb	ed or problematic.
5 cm	Mucky Peat or Peat	(53) (LRR F)	1	(.,, .	. =,		
	-	(S3) (LRR F)		(141210				
Restrictive L	_ayer: (if observed)	(53) (LRR F)		(101210		. =		
Restrictive L	_ayer: (if observed)	(53) (LRR F)		(141214			Unatria 0	ell Proceed (Control of the Control
Restrictive L	_ayer: (if observed)	(53) (LRR F)		(101210		. =,	Hydric So	oil Present? Yes No _X
Restrictive L Type: Depth (inc	_ayer: (if observed)	(53) (LRR F)		(111213			Hydric Sc	oil Present? Yes No X
Restrictive L Type: Depth (inc	_ayer: (if observed)	(53) (LKK F)		(**************************************			Hydric So	oil Present? Yes <u>No X</u>
Restrictive L Type: Depth (inc Remarks:	_ayer: (if observed) hes):	(53) (LKK F)		(1121)			Hydric So	bil Present? Yes No_X
Restrictive L Type: Depth (inc Remarks:	_ayer: (if observed) hes):	(53) (LKK F)		(**************************************			Hydric So	oil Present? Yes <u>No</u> X
Restrictive L Type: Depth (inc Remarks: HYDROLOG	_ayer: (if observed) hes):							oil Present? Yes No X
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd	Ayer: (if observed) thes): Y drology Indicators: eators (minimum of or		t; check all that	apply)				ors (minimum of two required)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	Ayer: (if observed) thes): Y drology Indicators: eators (minimum of or one water (A1)		d; check all that	apply) alt Crust (E	311)			ors (minimum of two required) Surface Soil Cracks (B6)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	Ayer: (if observed) thes): Y drology Indicators: cators (minimum of or ce Water (A1) Water Table (A2)		d; check all that	<i>apply)</i> alt Crust (E quatic Fau	311) na (B13)	s		ors <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Ayer: (if observed) hes): Y drology Indicators: cators (minimum of or		d; check all that S A	<i>apply)</i> alt Crust (E quatic Fau ydrogen Si	311) na (B13) ulfide Odor	S (C1)		ors (minimum of two required) Surface Soil Cracks (B6)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Y drology Indicators: eators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1)		d; check all thatSAH	<i>apply)</i> alt Crust (E quatic Fau ydrogen Si ry-Season	311) na (B13) ulfide Odor Water Tab	S (C1)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin	Ayer: (if observed) thes): Y drology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2)		d; check all thatAD	<i>apply)</i> alt Crust (E quatic Fau ydrogen Si ry-Season xidized Rhiz	311) na (B13) ulfide Odor Water Tab ospheres on	S (C1)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I	Ayer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of or		d; check all that S A H O (v	apply) alt Crust (E quatic Fau ydrogen Si ry-Season xidized Rhize	311) na (B13) ulfide Odor Water Tab ospheres on	S (C1) ole (C2) Living Roots (C3)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal	Ayer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of or		d; check all thatSA H D (v	apply) alt Crust (E quatic Fau ydrogen Si ry-Season xidized Rhize where not	311) na (B13) ulfide Odor Water Tab ospheres on t illed) Reduced	Solution (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [Algal Iron [Y drology Indicators: eators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	ne is required	d; check all that S A H O (v	apply) alt Crust (E quatic Faul ydrogen Si ry-Season xidized Rhize where not the resence of hin Muck S	311) na (B13) ulfide Odor Water Tab ospheres on tilled) Reduced	Solution (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C4) Geomorphic Position (D2)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [Algal Iron [Inund	Y drology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aeria	ne is required	d; check all that S A H O (v	apply) alt Crust (E quatic Fau ydrogen Si ry-Season xidized Rhize where not	311) na (B13) ulfide Odor Water Tab ospheres on tilled) Reduced	Solution (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [Algal Iron [Inund	Y drology Indicators: eators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	ne is required	d; check all that S A H O (v	apply) alt Crust (E quatic Faul ydrogen Si ry-Season xidized Rhize where not the resence of hin Muck S	311) na (B13) ulfide Odor Water Tab ospheres on tilled) Reduced	Solution (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C4) Geomorphic Position (D2)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [Algal Iron [Inund Wate	Y drology Indicators: eators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aeria r-Stained Leaves (B5)	ne is required	d; check all that S A H O (v	apply) alt Crust (E quatic Faul ydrogen Si ry-Season xidized Rhize where not the resence of hin Muck S	311) na (B13) ulfide Odor Water Tab ospheres on tilled) Reduced	Solution (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate	Ayer: (if observed) Thes): Y Arology Indicators: Eators (minimum of or	ne is required	d; check all that S A H O (v	apply) alt Crust (E quatic Faul ydrogen Si ry-Season xidized Rhize where not the resence of hin Muck S	311) na (B13) ulfide Odor Water Tab ospheres on tilled) Reduced I ourface (C7	Solution (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [Algal Iron [Inund	Ayer: (if observed) Thes): Y Arology Indicators: Eators (minimum of or	ne is required	d; check all thatSAD	apply) alt Crust (Equatic Faulty of the proof of the proo	311) na (B13) ulfide Odor Water Tab ospheres on tilled) Reduced (C7 surface (C7 sin in Rema	Solution (C1) Living Roots (C3) Iron (C4) (7) Parks)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Canonic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determinat	ion Dat	a Form	- Grea	at Plains R	egion		
Project/Site: I-25/I-80 Interchange		City/C	ounty: Che	yenne/La	aramie	Sampling D	ate: 7/3	80/2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation				State: V	NY Sampling Po	oint:	S-7
Investigator(s): R. Newton, D. Soucy					Sect	tion, Township, Range	e: S11 T13N	R67W
Landform (hillslope, terrace, etc.): swale		Loca	al Relief (co	ncave, co	onvex, none):	concave	Slope ((%): 0-3
Subregion (LRR): G - Western Great Pla	ins	Lat.	2223	16.4934	Long	g: 742867.3368	Datur	n: WYE
Soil Map Unit Name: Poposhia-Trimad com	plex, 3 to 15 perce	ent slopes				NWI Classification:		JPL
Are climatic/hydrologic conditions on the site	typical for this time	e of year?	Yes	Х	No	 (If no, explain in Re	marks)	
Are Vegetation , Soil , or Hy	drology sig	nificantly di	sturbed? A	re "Norm	al Circumstan	 ces" present? Yes	Х	(No
Are Vegetation , Soil , or Hy	drology nat	turally probl	lematic?		(If needed,	explain any answers	in Remarks.	
SUMMARY OF FINDINGS - Attach site map		• •		ansects,			,	
Hydrophytic Vegetation Present? Yes	No X	31				,		
Hydric Soil Present? Yes	No		Is the Sar	npled Are	ea within a We	etland?	Yes N	lo X
Wetland Hydrology Present? Yes	No X			•				
Remarks:								
Vegetated swale appearing dark on aerial ima	agery but lacking v	vetland indi	cators.					
VEGETATION - Use scientific names of pla	nts.							
	Absolute Do	minant	Indicator	Domina	nce Test Wo	rksheet:		
Tree Stratum (Plot size: 30x30 ft)	% Cover Sp	ecies?	Status		of Dominant S	•		
1				I	OBL, FACW	, or FAC:	0	(A)
2				(excludi	ng FAC-):			
3				Total Nu	ımber of Domi	inant		
4				Species	Across All Str	rata:	2	(B)
5								
_	0 = Tota	al Cover		Percent	of Dominant S	Species		
Sapling/Shrub Stratum (Plot size: 15x	15 ft)			That Are	OBL, FACW	, or FAC:	0%	(A/B)
1								
2.				Prevale	nce Index Wo	orksheet:		
3.					Total % Cov	er of:	Multip	ly by:
4.				OBL	species	0	x 1 =	0
5				FACW	species	0	x 2 =	0
	0 = Tota	al Cover		FAC	species	0	x 3 =	0
Herb Stratum (Plot size: 5x5 ft)				FACU	species	50	x 4 =	200
Agropyron cristatum	30	Υ	NI	UPL	species	48	x 5 =	240
2. Bromus tectorum	8	N	NI	Column	Totals:	98	(A)	440 (B)
3. Mirabilis hirsuta	10	N	NI		Pre	evalence Index = B/A	= 4.5	
4. Poa pratensis	50	Υ	FACU	Hydrop	hytic Vegetat	ion Indicators:		
5					1. Rapid	Test for Hydrophytic	Vegetation	
6.					2. Domii	nance Test is >50%.		
7.					3. Preva	alence Index is <3.01		
8.						hological Adaptations¹		
9.					porting of	data in Remarks or on	a separate s	sheet)
0					Problem	natic Hydrophytic Vege	etation (Expla	ain)
	98 = Tota	al Cover						
Woody Vine Stratum (Plot size: 30x30	ft)							
1						nydric soil and wetland h		t be
2					present, unless	s disturbed or problema	tic.	
_		Total Cover						
% Bare Ground in Herb Stratum	2%				Hydrophytic V	egetation Present?	Yes	X No
Remarks:								
Species with no indicator (NI) are treated as U	JPL for this analys	sis.						

Sampling Point:

S-7

	Matrix		Redox Feature	S		
(inches)	Color (moist) %	Color (moist)	% Тур	e ¹ Loc ²	Texture	Remarks
						
1 _{Type:} C=C	oncentration, D=Depletion, RM	1-Poduced Matrix	CS-Covered or	Coated Sand Grains	² l coation: PI =	Pore Lining, M=Matrix
		-Reduced Matrix,	CS-Covered or	Coaled Salid Grains.		
Hydric Soil			2 de 01	(24)		rs for Problematic Hydric Soils ³ :
	sol (A1)	_		ed Matrix (S4)		cm Muck (A9) (LRR I, J)
	Epipedon (A2)	_	Sandy Redo			past Prairie Redox (A16) (LRR F, G, H)
	(Histic (A3)	_	Stripped Ma	,		ark Surface (S7) (LRR G)
	ogen Sulfide (A4)	_		ky Mineral (F1)	н	igh Plains Depressions (F16)
	ified Layers (A5) (LRR F)	_		ed Matrix (F2)	_	(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, G, H)	_	Depleted Ma	,		educed Vertic (F18)
	eted Below Dark Surface (A11)	' <u> </u>		Surface (F6)		ed Parent Material (TF2)
	Dark Surface (A12)	_		rk Surface (F7)		ther (Explain in Remarks)
	ly Mucky Mineral (S1)			essions (F8)		rs of hydrophylic vegetation and
	m Mucky Peat or Peat (S2) (LF	_		Depressions (F16)		hydrology must be present, unless d or problematic.
5 Cm	Mucky Peat or Peat (S3) (LRF	₹F) 	(MLKA 72 8	& 73 of LRR H)		
Restrictive	Layer: (if observed)					
Type:						
1,700					· ·	
Depth (inc	ches):				Hydric Soi	Present? Yes No No
	ches):				Hydric Soi	Present? Yes No No
Depth (inc	estigated. No wetland hydrolog	y or dominant hydr	ophytic vegetati	on.	Hydric Soi	Present? Yes No No
Depth (incomplete Depth	estigated. No wetland hydrolog	y or dominant hydr	ophytic vegetati	on.	Hydric Soil	Present? Yes No No
Depth (inc Remarks: Soils not invo	estigated. No wetland hydrolog	y or dominant hydi	ophytic vegetati	on.	Hydric Soi	Present? Yes No
Depth (income Remarks: Soils not involved HYDROLOG Wetland Hydrolog Depth (income Remarks)	estigated. No wetland hydrolog GY drology Indicators:			on.	Hydric Soil	Present? Yes No
Depth (incomplete for the control of	estigated. No wetland hydrolog SY drology Indicators: cators (minimum of one is requ	uired; check all that	apply)			s (minimum of two required)
Depth (incomplete incomplete inco	estigated. No wetland hydrolog iY drology Indicators: cators (minimum of one is requace Water (A1)	iired; check all that	apply)	s		s (minimum of two required) Surface Soil Cracks (B6)
Depth (incomplete incomplete inco	estigated. No wetland hydrolog GY drology Indicators: cators (minimum of one is required Water (A1) Water Table (A2)	ired; check all that	<i>apply)</i> alt Crust (B11) quatic Fauna (B	13)		s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Depth (inco Remarks: Soils not invo HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	estigated. No wetland hydrolog GY drology Indicators: cators (minimum of one is requace Water (A1) Water Table (A2) ration (A3)	iired; check all that	<i>apply)</i> salt Crust (B11) quatic Fauna (B lydrogen Sulfide	13) Odor (C1)		s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Depth (incomplete incomplete inco	estigated. No wetland hydrolog GY drology Indicators: cators (minimum of one is required water (A1) Water Table (A2) ration (A3) er Marks (B1)	uired; check all that	apply) salt Crust (B11) quatic Fauna (B lydrogen Sulfide bry-Season Wate	13) Odor (C1) er Table (C2)	Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Depth (incomplete incomplete inco	estigated. No wetland hydrolog GY drology Indicators: cators (minimum of one is required Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2)	uired; check all that	apply) salt Crust (B11) quatic Fauna (B lydrogen Sulfide bry-Season Wate	13) Odor (C1)	Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Depth (incomplete property) Remarks: Soils not involved by the primary Indicomplete primary Indicate prim	estigated. No wetland hydrolog GY drology Indicators: cators (minimum of one is requirace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3)	ired; check all that S A B C C C (1	apply) calt Crust (B11) cquatic Fauna (B lydrogen Sulfide bry-Season Wate exidized Rhizosphe	13) Odor (C1) er Table (C2) res on Living Roots (C3)	Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Depth (incomplete property) Remarks: Soils not involved by the primary Indicomplete primary Indicate prim	estigated. No wetland hydrolog GY drology Indicators: cators (minimum of one is required Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2)	ired; check all thatSAFCC	apply) salt Crust (B11) quatic Fauna (B lydrogen Sulfide bry-Season Wate exidized Rhizosphe where not tilled	13) Odor (C1) er Table (C2) res on Living Roots (C3)) uced Iron (C4)	Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Depth (incomplete in the content of	estigated. No wetland hydrolog drology Indicators: cators (minimum of one is required Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	ired; check all that S A B C C C C T	apply) calt Crust (B11) cquatic Fauna (B lydrogen Sulfide bry-Season Wate exidized Rhizosphe	13) Odor (C1) er Table (C2) res on Living Roots (C3)) uced Iron (C4)	Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Depth (incomplete in the content of	estigated. No wetland hydrolog GY drology Indicators: cators (minimum of one is required water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	ired; check all that S A B C C C C T	apply) salt Crust (B11) quatic Fauna (B lydrogen Sulfide bry-Season Wate exidized Rhizosphe where not tilled	Solution (C4) See (C7)	Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5)
Depth (incomplete incomplete inco	estigated. No wetland hydrolog drology Indicators: cators (minimum of one is required Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	ired; check all that S A B C C C C T	apply) salt Crust (B11) equatic Fauna (B lydrogen Sulfide bry-Season Wate exidized Rhizosphe where not tilled bresence of Red chin Muck Surface	Solution (C4) See (C7)	Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Depth (incomplete incomplete inco	estigated. No wetland hydrolog GY drology Indicators: cators (minimum of one is requirated Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aerial Imagery er-Stained Leaves (B9)	ired; check all that S A B C C C C T	apply) salt Crust (B11) equatic Fauna (B lydrogen Sulfide bry-Season Wate exidized Rhizosphe where not tilled bresence of Red chin Muck Surface	Solution (C4) See (C7)	Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Depth (incomplete incomplete inco	estigated. No wetland hydrolog GY drology Indicators: cators (minimum of one is required water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aerial Imagery er-Stained Leaves (B9) vations:	ired; check all that S A B C C C C T	apply) salt Crust (B11) equatic Fauna (B lydrogen Sulfide bry-Season Wate exidized Rhizosphe where not tilled bresence of Red chin Muck Surface	Solution (C4) See (C7)	Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5)
Depth (incomplete property) Remarks: Soils not involved primary Indicomplete primary Indicates primary Indicat	estigated. No wetland hydrolog drology Indicators: cators (minimum of one is required Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aerial Imagery er-Stained Leaves (B9) vations: er Present?	ired; check all that S A B C C (N B C Y Y Y Y Y Y S C C C C C C C C C C C C	apply) salt Crust (B11) equatic Fauna (B elydrogen Sulfide elydrogen Sulfide elydrogen Wate exidized Rhizosphe exhere not tilled eresence of Rede ehin Muck Surfac ether (Explain in	Solution (C1) Odor (C1) Per Table (C2) res on Living Roots (C3) Luced Iron (C4) Per (C7) Remarks)	Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Depth (incomplete field Obsers Surface Water Table	estigated. No wetland hydrolog drology Indicators: cators (minimum of one is required Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aerial Imagery er-Stained Leaves (B9) vations: er Present?	y (B7) Yes Yes Yes	apply) salt Crust (B11) equatic Fauna (B dydrogen Sulfide bry-Season Wate exidized Rhizosphe where not tilled bresence of Red chin Muck Surfac other (Explain in	13) Odor (C1) er Table (C2) res on Living Roots (C3) uced Iron (C4) ee (C7) Remarks) Depth (inches)	Secondary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology

Wetland D	etermination [Data Form	ı - Great Plains Regi	ion	
Project/Site: I-25/I-80 Interchange	Ci	ty/County: Che	yenne/Laramie	Sampling Date:	7/30/2019
Applicant/Owner: Wyoming Dept. of Tran	sportation		State: WY	Sampling Point:	S-8
Investigator(s): R. Newton, D. Soucy			Section	, Township, Range: S1	1 T13N R67W
Landform (hillslope, terrace, etc.): depression	on I	_ocal Relief <i>(co</i>	ncave, convex, none):	concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	S L	at. 2226	28.1851 Long:	742414.9502	Datum: WY E
Soil Map Unit Name: Poposhia-Trimad comple	ex, 3 to 15 percent slop	es	N	WI Classification:	UPL
Are climatic/hydrologic conditions on the site typ	oical for this time of year	ar? Yes	X No(/i	f no, explain in Remarks	s)
Are Vegetation , Soil , or Hydro	ology significant	ly disturbed? A	re "Normal Circumstances	" present? Yes	X No
Are Vegetation , Soil , or Hydro	ology naturally p	oroblematic?	(If needed, ex	plain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map s	howing sampling poi	nt locations, tr	ansects, important featur	es, etc.	
Hydrophytic Vegetation Present? Yes X	No				
Hydric Soil Present? Yes X	No	Is the Sa	mpled Area within a Wetlar	nd? Yes	X No
Wetland Hydrology Present? Yes X	No		•	-	
	- · · · · · · · · · · · · · · · · ·				
Remarks:					
Depressional palustrine emergent wetland PEM	-3				
VEGETATION - Use scientific names of plant					
VEGETATION - Use scientific frames of plant	Absolute Dominant	Indicator	Dominance Test Worksl		
<u>Tree Stratum</u> (Plot size: 30x30 ft)	% Cover Species?	Status	Number of Dominant Spe		
1.			That Are OBL, FACW, or	FAC:	1 (A)
2.		·	(excluding FAC-):		
3.			Total Number of Dominar	nt	
4.			Species Across All Strata		1 (B)
5.					
Sapling/Shrub Stratum (Plot size: 15x15	0 = Total Cove	er 	Percent of Dominant Spe That Are OBL, FACW, or		100% (A/B)
2			Prevalence Index Works	sheet:	
3			Total % Cover	of:	Multiply by:
4			OBL species	65 x 1 =	65
5			FACW species	20 x 2 =	
<u>-</u>	0 = Total Cove	er	FAC species	10 x 3 =	
Herb Stratum (Plot size: 5x5 ft)			FACU species	0 x 4 =	
1. Hordeum jubatum	5 N	FACW	UPL species	0 x 5 =	
2. Poa palustris	15 N	FACW	Column Totals:	95 (A)	
3. Elymus riparius	10 N	FAC		ence Index = B/A =	1.4
4. Eleocharis quinqueflora	65 Y	OBL	Hydrophytic Vegetation		4-4:
5				est for Hydrophytic Vege ace Test is >50%.	Hation
6				ce Index is <3.01	
·				ogical Adaptations¹ (Pro	vide sun-
8. 9.				in Remarks or on a se	
10.			Problemation	Hydrophytic Vegetation	n (Explain)
	95 = Total Cove	er			
Woody Vine Stratum (Plot size: 30x30 ft)				
1			¹ Indicators of hydr	ic soil and wetland hydrol	ogy must be
2.			present, unless dis	turbed or problematic.	
	0 = Total Co	over			
% Bare Ground in Herb Stratum 5	%		Hydrophytic Vege	tation Present?	X Yes No
Remarks:					

Sampling Point:

S-8

	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10 YR 3/2	100					Clay Loam	
2-16	10 YR 5/3	80	7.5 YR 4/6	20	С	PL	Sandy Loam	
Type: C=Co	oncentration, D=Dep	letion, RM	=Reduced Matrix	CS=Cove	red or Coa	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil	Indicators						Indicat	ors for Problematic Hydric Soils ³ :
Histo	sol (A1)			Sandy	Gleyed N	Matrix (S4)	:	1 cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)		-	Sandy	Redox (S	S5)		Coast Prairie Redox (A16) (LRR F, G, H)
	(Histic (A3)		-		ed Matrix	•		Dark Surface (S7) (LRR G)
—— Hydro	ogen Sulfide (A4)		-	Loam	y Mucky N	Mineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LR	RR F)	-	Loam	y Gleyed I	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	•	-		ted Matrix		1	Reduced Vertic (F18)
Deple	eted Below Dark Sur	face (A11)	-	Redox	x Dark Su	rface (F6)		Red Parent Material (TF2)
	Dark Surface (A12)		-	Deple	ted Dark	Surface (F7)		Other (Explain in Remarks)
Sand	y Mucky Mineral (S1	1)	-	X Redox	x Depress	ions (F8)	3Indicat	tors of hydrophylic vegetation and
2.5 c	m Mucky Peat or Pe	at (S2) (LF	RR G, H)	High F	Plains Dep	oressions (F16)		d hydrology must be present, unless
5 cm	Mucky Peat or Peat	(S3) (LRR	R F)	(ML	RA 72 & 73	of LRR H)	disturb	ed or problematic.
Postriotivo I	Layer: (if observed)		•					
Resulctive i	, (
Туре:	:hes):						Hydric So	oil Present? Yes X No
Type: Depth <i>(inc</i>	:hes):						Hydric Sc	oil Present? Yes X No
Type: Depth <i>(inc</i>	:hes):						Hydric Sc	oil Present? Yes X No
Type: Depth <i>(inc</i>	hes):						Hydric So	oil Present? Yes X No
Type: Depth (inco	Y						Hydric So	oil Present? Yes X No
Type: Depth (incomments: Remarks: HYDROLOG Wetland Hyd	Y drology Indicators:		ired; check all the	t anniu)				
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic	oy drology Indicators: cators (minimum of c				(D44)			ors (minimum of two required)
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic	drology Indicators: cators (minimum of cators (Mater (A1)			Salt Crust (` ′			ors (minimum of two required) Surface Soil Cracks (B6)
Type: Depth (incomplete in the complete in the	drology Indicators: cators (minimum of cators (A1) water Table (A2)			Salt Crust (Aquatic Fa	una (B13)	1		ors <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Type: Depth (incomplete in the content of the conte	drology Indicators: cators (minimum of cators (A1) water Table (A2) cation (A3)			Salt Crust (Aquatic Fal Hydrogen S	una (B13) Sulfide Od	lor (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Type: Depth (incomplete incomplete incomplet	drology Indicators: cators (minimum of cators (A1) water Table (A2) cation (A3) or Marks (B1)			Salt Crust (Aquatic Far Hydrogen S Dry-Seasor	una (B13) Sulfide Od n Water T	lor (C1) able (C2)	Secondary Indicato	ors <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Type: Depth (incomplete incomplete incomplet	drology Indicators: cators (minimum of cators (Manimum of cators (Mani		<u></u>	Salt Crust (Aquatic Fal Hydrogen S Dry-Seasor Oxidized Rhi	una (B13) Sulfide Od n Water T zospheres	lor (C1)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Type: Depth (incomplete incomplete incomplet	cators (minimum of concernation (A3) artion (A3) art Marks (B1) ment Deposits (B2) Deposits (B3)		<u></u>	Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Oxidized Rhi (where not	una (B13) Sulfide Od n Water T zospheres t tilled)	lor (C1) able (C2) on Living Roots (C3	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Type: Depth (incomplete incomplete incomplet	drology Indicators: cators (minimum of cators (Minimum of cators (Minimum of cators (Mater (A1))) Water Table (A2) cation (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)		<u></u>	Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Oxidized Rhi (where not) Presence c	una (B13) Sulfide Od n Water T zospheres t tilled) of Reduce	lor (C1) able (C2) on Living Roots (C3) d Iron (C4)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron [cators (minimum of cators: minimum of cators (minimum of cators (Mater Table (A2) mation (A3) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	one is requ		Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Dxidized Rhi (where not Presence c Thin Muck	una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce Surface (lor (C1) lable (C2) on Living Roots (C3) d Iron (C4) C7)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2)
Type: Depth (incomplete in the content of the conte	cators (minimum of concernation (A3) artion (A3) artion (A3) artion (A3) artion (B1) artion (B2) beposits (B3) artion (B4) beposits (B5) dation Visible on Aer	one is requi		Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Oxidized Rhi (where not) Presence c	una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce Surface (lor (C1) lable (C2) on Living Roots (C3) d Iron (C4) C7)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type: Depth (incomplete in the content of the conte	cators (minimum of control (March 1982) The water (A1) Water Table (A2) Tation (A3) Tation (A3) The Marks (B1) The ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Station Visible on Aerestained Leaves (B	one is requi		Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Dxidized Rhi (where not Presence c Thin Muck	una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce Surface (lor (C1) lable (C2) on Living Roots (C3) d Iron (C4) C7)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2)
Type: Depth (incomplete incomplete incomplet	drology Indicators: cators (minimum of of other Cators) water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aeror-Stained Leaves (B	one is requi	X	Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Oxidized Rhi (where not Presence of Thin Muck Other (Exp	una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce Surface (i	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Type: Depth (incomplete incomplete incomplet	cators (minimum of concernation (A3) For Marks (B1) For Marks (B3) For Marks (B3) Mat or Crust (B4) Deposits (B5) Idation Visible on Aerer-Stained Leaves (Bay) For Present?	one is requi	X (B7) Yes	Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Oxidized Rhi (where not Presence c Thin Muck Other (Exp	una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce Surface (i	lor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Type: Depth (incomplete in the content of the conte	cators (minimum of concernation (A3) For Marks (B1) For Marks (B3) For Marks (B3) Mat or Crust (B4) Deposits (B5) Idation Visible on Aerer-Stained Leaves (Bay) For Present?	ial Imagery	X (B7) Yes	Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Oxidized Rhi (where not Presence c Thin Muck Other (Exp	una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce Surface (i	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determin	ation Da	ala Fori	11 - Grea	at Plains Re	gion	
Project/Site: I-25/I-80 Interchange		City	/County: Ch	eyenne/La	aramie	Sampling Date:	7/30/2019
Applicant/Owner: Wyoming Dept. of To	ransportation		'		State: W	Y Sampling Point:	S-9
Investigator(s): R. Newton, D. Soucy					Section	on, Township, Range: S 1	11 T13N R67W
Landform (hillslope, terrace, etc.): minor	slope	Lo	cal Relief (c	concave, co	onvex, none):	none	Slope (%): 0-1
Subregion (LRR): G - Western Great Plant	ains	Lat	. 222	639.3463	Long:	742416.6928	Datum: WY E
Soil Map Unit Name: Poposhia-Trimad com	iplex, 3 to 15 pe	ercent slopes	S			NWI Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for this t	time of year?	? Ye	s X	No	(If no, explain in Remark	(s)
Are Vegetation, Soil, or H	ydrology	significantly	disturbed?	Are "Norma	al Circumstance	es" present? Yes	X No
Are Vegetation , Soil , or H	ydrology	naturally pro	oblematic?		(If needed, e	explain any answers in R	Pemarks.)
SUMMARY OF FINDINGS - Attach site map	showing sam	pling point	locations,	transects,	important feat	ures, etc.	
Hydrophytic Vegetation Present? Yes	No X						
Hydric Soil Present? Yes	No X	•	Is the S	ampled Are	ea within a Wetla	and? Yes	No X
Wetland Hydrology Present? Yes	No X	i		•			
Remarks:		1					
Paired upland point for PEM-3.							
VEGETATION - Use scientific names of pla				Ini	T4 \4/l.	-l4-	
Tree Stratum (Plot size: 30x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status		nce Test Work of Dominant Sp		
1					OBL, FACW, o		0 (A)
2.					ng FAC-):	_	
3.				Total Nu	ımber of Domina	ant	
4.					Across All Strat		1 (B)
5.						_	
	0 =	Total Cover		Percent	of Dominant Sp	necies	
Sapling/Shrub Stratum (Plot size: 15x	(15 ft)				OBL, FACW, o		0% (A/B)
1.						_	
2.				Prevale	nce Index Worl	ksheet:	
3.					Total % Cove	r of:	Multiply by:
4.	<u> </u>			OBL	species	0 x 1	= 0
5.	<u> </u>			FACW	species	0 x 2	= 0
	0 =	Total Cover		FAC	species	0 x 3	= 0
<u>Herb Stratum (</u> Plot size: 5x5 ft)				FACU	species	0 x 4	= 0
1. Bromus tectorum	75	Υ	NI	UPL	species	95 x 5	475
2. Plantago patagonica	2	N	NI	Column	Totals:	95 (A)) 475 (B)
3. Sphaeralcea ambigua	6	N	NI		Prev	alence Index = B/A =	5.0
4. Agropyron cristatum	7	N	NI	Hydrop	hytic Vegetatio	n Indicators:	
5. Tragopogon dubius	5	N	NI		1. Rapid T	Γest for Hydrophytic Veg	etation
6						ance Test is >50%.	
7						ence Index is <3.01	
8					•	ological Adaptations¹ (Pro	•
9					porting da	ita in Remarks or on a s	eparate sheet)
0					Problemat	tic Hydrophytic Vegetation	on (Explain)
	95 =	Total Cover					
Woody Vine Stratum (Plot size: 30x30	ft)						
\						dric soil and wetland hydro	ology must be
1						disturbed or problematic.	
12.					present, unless o	distance of problematic.	
1		= Total Cov	er		•	·	
12	0 %	= Total Cov	er		•	getation Present?	Yes X No
1		= Total Cov	er		•	·	Yes X No

SOIL Sampling Point: S-9 Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Depth (inches) Loc² Color (moist) Color (moist) Texture Type³ Remarks 0-18 10 YR 3/2 100 Clay Loam ²Location: PL=Pore Lining, M=Matrix ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators Indicators for Problematic Hydric Soils³: Histosol (A1) Sandy Gleyed Matrix (S4) 1 cm Muck (A9) (LRR I, J) Histic Epipedon (A2) Sandy Redox (S5) Coast Prairie Redox (A16) (LRR F, G, H) Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR G) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) (LRR H outside of MLRA 72 & 73) 1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F3) Reduced Vertic (F18) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Red Parent Material (TF2) Depleted Dark Surface (F7) Thick Dark Surface (A12) Other (Explain in Remarks) Sandy Mucky Mineral (S1) Redox Depressions (F8) ³Indicators of hydrophylic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) wetland hydrology must be present, unless disturbed or problematic. 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) Restrictive Layer: (if observed) Type: Depth (inches): No X **Hydric Soil Present?** Yes Remarks: **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Sparsley Vegetated Concave Surf. (B8) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Oxidized Rhizospheres on Living Water Marks (B1) Dry-Season Water Table (C2) Roots (C3) (where tilled) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Crayfish Burrows (C8) Drift Deposits (B3) (where not tilled) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Depth (inches) Yes No Х **Wetland Hydrology**

US Army Corps of Engineers Great Plains Region - Version 2.0

No X

No X

Yes

Depth (inches)

Depth (inches)

Water Table Present?

Remarks:

Saturation Present? (includes capillary fringe)

Present?

X No

Yes

Wetland Determinat	ion Data Form	- Great Plains Regio	n	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Transportation	_	State: WY	Sampling Point:	S-10
Investigator(s): R. Newton, D. Soucy		Section,	Fownship, Range: S1 2	2 T13N R67W
Landform (hillslope, terrace, etc.): depression	Local Relief (co	ncave, convex, none): n	ninor concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	 Lat. 22236		744110.0081	Datum: WY E
Soil Map Unit Name: Merden silty clay loam, 0 to 3 percent sl	opes	NW	I Classification:	UPL
Are climatic/hydrologic conditions on the site typical for this time	e of year? Yes	X No (If r	no, explain in Remarks	s)
Are Vegetation , Soil , or Hydrology sig	inificantly disturbed? A	re "Normal Circumstances" p	present? Yes	X No
· · · · · · — ·	turally problematic?		ain any answers in Re	
SUMMARY OF FINDINGS - Attach site map showing sampli	• •			marks.)
	ing point locations, tr	ansects, important reature:	5, 616.	
Hydrophytic Vegetation Present? Yes X No				NI V
Hydric Soil Present? Yes No X	is the Sai	mpled Area within a Wetland	? Yes_	No_X_
Wetland Hydrology Present? Yes X No				
Remarks: Depressional area with dominant hydrophytic vegetation and w	etland hydrology hut la	cking hydric soils		
VEGETATION - Use scientific names of plants.	eliand flydrology but la	cking nyunc sons.		
	ominant Indicator	Dominance Test Workshe	et:	
	pecies? Status	Number of Dominant Speci	es	
1.		That Are OBL, FACW, or F.	AC:	1 (A)
2.		(excluding FAC-):		
3.		Total Number of Dominant		
4.		Species Across All Strata:		1 (B)
5.				
0 = Tot Sapling/Shrub Stratum (Plot size: 15x15 ft) 1.	al Cover	Percent of Dominant Specie That Are OBL, FACW, or F.		100% (A/B)
2.		Prevalence Index Worksh	eet:	
3.		Total % Cover of	:	Multiply by:
4.		OBL species	0 x 1 =	0
5.		FACW species	85 x 2 =	170
0 = Tot	al Cover	FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)		FACU species	0 x 4 =	0
1. Hordeum jubatum 85	Y FACW	UPL species	0 x 5 =	0
2.		Column Totals:	85 (A)	170 (B)
3.		Prevaler	nce Index = B/A =	2.0
4.		Hydrophytic Vegetation Ir	idicators:	
5.		X 1. Rapid Test	for Hydrophytic Vege	tation
6		X 2. Dominance	e Test is >50%.	
7		X 3. Prevalence	_	
8		, ,	ical Adaptations¹ (Prov	
9		porting data ii	n Remarks or on a se	parate sheet)
10.		Problematic H	Hydrophytic Vegetatio	n (Explain)
85 = Tot	al Cover			
Woody Vine Stratum (Plot size: 30x30 ft)				
1		¹ Indicators of hydric	soil and wetland hydrol	ogy must be
2.			rbed or problematic.	
0 =	Total Cover			
% Bare Ground in Herb Stratum 15 %		Hydrophytic Vegeta	tion Present?	X Yes No
Remarks:				

S-10

	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10 YR 2/2	100					sandy clay loam	
2-8	10 YR 5/3	80					Sand	
	10 YR 2/2	20					sandy clay loam	
8-18	10 YR 5/2	100					sandy clay loam	
¹ Type: C=Co	oncentration, D=Dep	oletion, RM=	Reduced Matrix,	CS=Cover	ed or Coa	ated Sand Grains	s. ² Location: PL=	Pore Lining, M=Matrix
Hydric Soil	Indicators						Indicato	rs for Problematic Hydric Soils ³ :
Histo	sol (A1)			Sandy	Gleyed N	//atrix (S4)	1	cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)		_	Sandy	Redox (S	S5)	c	oast Prairie Redox (A16) (LRR F, G, F
Black	(Histic (A3)		_	Strippe	ed Matrix	(S6)	D	ark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)		_	Loamy	Mucky N	lineral (F1)	——	igh Plains Depressions (F16)
Strati	ified Layers (A5) (LF	RF)	_	Loamy	Gleyed I	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F,	G , H)	_	Deplet	ed Matrix	(F3)	R	educed Vertic (F18)
Deple	eted Below Dark Sur	rface (A11)	_	Redox	Dark Sur	face (F6)	R	ed Parent Material (TF2)
Thick	Dark Surface (A12))	_	Deplet	ed Dark S	Surface (F7)		ther (Explain in Remarks)
Sand	y Mucky Mineral (S	1)	_	Redox	Depress	ions (F8)	3Indicate	ors of hydrophylic vegetation and
		oct (92) (I DI	R G, H)	— High P	Plains Dep	ressions (F16)		hydrology must be present, unless
2.5 c	m Mucky Peat or Pe	at (32) (LKI	· /					
	m Mucky Peat or Pe Mucky Peat or Peat		_	(MLR	RA 72 & 73	of LRR H)	disturbe	d or problematic.
5 cm	Mucky Peat or Peat	t (S3) (LRR I	_	(MLR	RA 72 & 73	of LRR H)	disturbe	d or problematic.
5 cm	-	t (S3) (LRR I	_	(MLF	RA 72 & 73	of LRR H)	disturbe	d or problematic.
5 cm Restrictive I Type:	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR I	_	(MLF	RA 72 & 73	of LRR H)		
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR I	_	(MLF	RA 72 & 73	of LRR H)	Hydric Soi	
5 cm Restrictive I Type:	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR I	_	(MLF	RA 72 & 73	of LRR H)		
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR I	_	(MLF	RA 72 & 73	of LRR H)		
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat Layer: (if observed) ches):	t (S3) (LRR I	_	(MLF	RA 72 & 73	of LRR H)		
Restrictive I Type: Depth (inco Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat Layer: (if observed) ches): Y drology Indicators:	t (S3) (LRR I	F)		RA 72 & 73	of LRR H)		
Restrictive I Type: Depth (inco Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat Layer: (if observed) ches):	t (S3) (LRR I	F)		RA 72 & 73		Hydric Soi	
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	Mucky Peat or Peat Layer: (if observed) ches): Y drology Indicators:	t (S3) (LRR I	ed; check all that				Hydric Soi	I Present? Yes No
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	Mucky Peat or Peat Layer: (if observed) ches): GY drology Indicators: cators (minimum of company)	t (S3) (LRR I	ed; check all that	t apply)	B11)		Hydric Soi	I Present? Yes No
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	Mucky Peat or Peat Layer: (if observed) ches): drology Indicators: cators (minimum of coorse Water (A1)	t (S3) (LRR I	ed; check all that	<i>t apply)</i> Salt Crust (I	B11) una (B13)		Hydric Soi	I Present? Yes No
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Mucky Peat or Peat Layer: (if observed) ches): drology Indicators: cators (minimum of companion of compani	t (S3) (LRR I	ed; check all that	<i>t apply)</i> Salt Crust (t Aquatic Fau	B11) una (B13) Sulfide Od	or (C1)	Hydric Soi	I Present? Yes No
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Mucky Peat or Peat Layer: (if observed) ches): drology Indicators: cators (minimum of conce Water (A1) Water Table (A2) ration (A3)	t (S3) (LRR I	ed; check all that	<i>t apply)</i> Salt Crust (I Aquatic Fau Hydrogen S Dry-Season	B11) una (B13) sulfide Od ı Water Ta	or (C1)	Hydric Soi	I Present? Yes No Ses (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High Satur Wate Sedir	Mucky Peat or Peat Layer: (if observed) ches): GY drology Indicators: cators (minimum of cators (minimum	t (S3) (LRR I	ed; check all that	<i>t apply)</i> Salt Crust (I Aquatic Fau Hydrogen S Dry-Season	B11) una (B13) sulfide Od u Water Ta	or (C1) able (C2)	Hydric Soi	I Present? Yes No
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I	Mucky Peat or Peat Layer: (if observed) ches): drology Indicators: cators (minimum of cators (Manimum of C	t (S3) (LRR I	ed; check all that	<i>t apply)</i> Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz	B11) una (B13) ulfide Od u Water Ta	or (C1) able (C2) on Living Roots (C3	Hydric Soi	I Present? Yes No Ses (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	Mucky Peat or Peat Layer: (if observed) ches): drology Indicators: cators (minimum of conce Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3)	t (S3) (LRR I	ed; check all that	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz	B11) una (B13) ulfide Od u Water Ta cospheres of tilled) f Reduced	or (C1) able (C2) on Living Roots (C3	Hydric Soi	I Present? Yes No Ses (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery
Festrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron [Mucky Peat or Peat Layer: (if observed) Ches): GY drology Indicators: cators (minimum of of other other of other other of other other of other othe	t (S3) (LRR I	ed; check all that	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz (where not	B11) una (B13) sulfide Od twater Ta cospheres of tilled) f Reduced Surface (0	or (C1) able (C2) on Living Roots (C3	Secondary Indicator 3)	I Present? Yes No Ses (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery
Festrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Peat Layer: (if observed) Ches): Grading Indicators: Cators (minimum of of other ot	t (S3) (LRR I	ed; check all that	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S	B11) una (B13) sulfide Od twater Ta cospheres of tilled) f Reduced Surface (0	or (C1) able (C2) on Living Roots (C3	Secondary Indicator 3)	I Present? Yes No S (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2)
Festrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Peat Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of control (A2) Cators (A3) Cators (B4) Cators (B3) Cators (B4) Cators (B4) Cators (B5) Cators (B5) Cators (B5) Cators (B5) Cators (B5) Cators (B5) Cators (B6) Cators (B	t (S3) (LRR I	ed; check all that	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S	B11) una (B13) sulfide Od twater Ta cospheres of tilled) f Reduced Surface (0	or (C1) able (C2) on Living Roots (C3	Secondary Indicator 3)	I Present? Yes No Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5)
Festrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	Mucky Peat or Peat Layer: (if observed) Ches): GY drology Indicators: cators (minimum of of other other of other other of other other other other other of other o	t (S3) (LRR I	ed; check all that	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S	B11) Juna (B13) Sulfide Od Water Ta zospheres of tilled) f Reduced Surface (Cain in Rer	or (C1) able (C2) on Living Roots (C3	Secondary Indicator 3)	I Present? Yes No Ses (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	Mucky Peat or Peat Layer: (if observed) Ches): Gradiology Indicators: Cators (minimum of of other other of other other of other ot	t (S3) (LRR I	ed; check all that	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S Other (Expla	B11) una (B13) Gulfide Od Water Ta cospheres of tilled) f Reduced Surface (Cain in Rer	or (C1) able (C2) on Living Roots (C3 d Iron (C4) C7) marks)	Secondary Indicator 3)	I Present? Yes No See (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Liviral Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR

Wetland	Determination	n Data Forr	n - Great Plains Regi	on	
Project/Site: I-25/I-80 Interchange		City/County: Ch	eyenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation		State: WY	Sampling Point:	S-11
Investigator(s): R. Newton, D. Soucy			Section,	Township, Range: S11	1 T13N R67W
Landform (hillslope, terrace, etc.): minor	terrace	Local Relief (c	concave, convex, none):	none	Slope (%): 0
Subregion (LRR): G - Western Great Pla	ains	Lat. 222	537.0475 Long:	743441.1377	Datum: WY E
Soil Map Unit Name: Merden silty clay loam	, 0 to 3 percent slope:	s	N	VI Classification:	PEMA/PEMC
Are climatic/hydrologic conditions on the site	typical for this time of	year? Ye	s X No (If	no, explain in Remarks	s)
Are Vegetation , Soil , or Hy	drology signific	cantly disturbed?	Are "Normal Circumstances"	present? Yes	X No
Are Vegetation , Soil , or Hy	drology natura	lly problematic?	(If needed, ext	olain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map					
Hydrophytic Vegetation Present? Yes		Joint Todations,	aunocoto, important routur	05, 010.	
	No_X	l - 41 - 0		10	N. V
Hydric Soil Present? Yes	No	is the S	ampled Area within a Wetlan	d? Yes_	No X
Wetland Hydrology Present? Yes	No X				
Remarks:					
Area mapped by NWI as palustrine emergent		etland indicators			
VEGETATION - Use scientific names of pla			<u> </u>		
Tree Stratum (Plot size: 30x30 ft)	Absolute Domina % Cover Specie		Dominance Test Worksh Number of Dominant Spec		
1	70 GOVEI OPECIE	ss: Otatus	That Are OBL, FACW, or		0 (A)
2			(excluding FAC-):		(A)
2.					
3.			Total Number of Dominan Species Across All Strata:		3 (B)
5.			Opecies Across Air Strata.		3 (B)
5	0 = Total C				
Coulings/Chart b Chart are / Diet eine		ovei	Percent of Dominant Spec		00/ (1/2)
Sapling/Shrub Stratum (Plot size: 15x	15 ft)		That Are OBL, FACW, or		0% (A/B)
1			5		
2			Prevalence Index Works		N. A I & San Landau .
3			Total % Cover of		Multiply by:
4			OBL species	0 x 1 =	
5		 -	FACW species	0 x 2 =	
Llaub Chushima (Dlat sima) 5.5 ft	0 = Total C	over	FAC species	0 x 3 =	
Herb Stratum (Plot size: 5x5 ft)	a= \		FACU species	30 x 4 =	
1. Euphorbia esula	25 Y	NI	UPL species	65 x 5 =	
2. Bromus inermis	40 Y	UPL	Column Totals:	95 (A)	445 (B)
3. Elymus repens	Y	FACU		ence Index = B/A =	4.7
4			Hydrophytic Vegetation		
5				st for Hydrophytic Vege	tation
6				ce Test is >50%.	
7				ce Index is <u><</u> 3.0¹ gical Adaptations¹ (Prov	data anna
8				gical Adaptations' (Prov in Remarks or on a se	•
9					
0			Problematic	Hydrophytic Vegetation	n (Explain)
	95 = Total C	over			
Woody Vine Stratum (Plot size: 30x30	<u>ft</u>)				
1.				c soil and wetland hydrol	ogy must be
2			present, unless dis	turbed or problematic.	
_		l Cover			
% Bare Ground in Herb Stratum	5 %		Hydrophytic Veget	ation Present?	Yes X No
Remarks:					
Species with no indicator (NI) are treated as I	JPL for this analysis.				

Depth Matrix Redox Peatures Color (moist) % Color (moist) % Texture Remarks		Matrix		Redox Feature	S		
"Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains." **Pydric Soil Indicators** Historia (A1) Historia (A2) Sandy Redox (S5) Black Histor (A3) Black Histor (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F1) Loamy Mucky Mineral (F1) Tom Muck (A3) (LRR F, G, H) Depleted Delow Dark Surface (A12) Depleted Delow Dark Surface (A12) Depleted Delow Dark Surface (A12) Sandy Rodox (S5) Sandy Rodox (S5) Depleted Delow Dark Surface (A11) Redox Dark Surface (F6) Sandy Mucky Mineral (F1) Thick Dark Surface (A12) Depleted Delow Dark Surface (A12) Depleted Delow Dark Surface (F6) Sandy Mucky Mineral (S1) Z.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F6) Type: Depth (mches): Redox Depressions (F16) Availations of hydrophyliv expetiation and wetland hydrology indicators. **Redox Depressions (F16) Type: Depth (mches): Redox Depressions (F16) Sc m Mucky Peat or Peat (S3) (LRR F) MIRA 72 & 73 of LRR H) **Redox Depressions (F16) Type: Depth (mches): **Hydric Soil Present?** Ves No **Remarks:** **Soil Croacks (66) Sandrace Water (A1) Surface Water (A1) Surface Water (A1) Surface Water (A1) Salt Crust (B11) Surface Soil Croacks (66) Salt Crust (B11) Surface Water (A1) Salt Crust (B1) Frosenter (B1) Oxidized Rhizospheres or Living Rodox (C1) Think Water Table (A2) Salt Crust (B11) Surface Water (A1) Salt Crust (B1) Frosenter (B1) Oxidized Rhizospheres or Living Rodox (C1) Frosenter (B1) Oxidized Rhizospheres or Living Frosenter (B1) Oxidized Rhizosphere or Living Frosenter (B1)	(inches) Color (n	noist) %	Color (moist)	% Typ	pe ¹ Loc ²	Texture	Remarks
Hydric Soil Indicators Histosol (A1)							
Hydric Soil Indicators Histosol (A1)							
Hydric Soil Indicators Histosol (A1)							
Hydric Soil Indicators Histosol (A1)							
Hydric Soil Indicators Histosol (A1)							
Hydric Soil Indicators Histosol (A1)			1				
Hydric Soil Indicators Histosol (A1)			1				
Hydric Soil Indicators Histosol (A1)	¹ Type: C=Concentration	D=Depletion RM	M=Reduced Matrix	CS=Covered or	Coated Sand Grains	² l ocation: PI =Por	e Lining M=Matrix
Histosol (A1) Histosol (A2) Sandy Gleyed Matrix (S4) Legipedon (A2) Sandy Redox (S5) Coast Prairie Redox (A16) (LRR F, 6, H) Black Histic (A3) Hydrogen Sulfide (A4) Loarny Mucky Mineral (F1) High Plains Depressions (F16) (LRR H outside of MLR 72 & 73) 1 orn Muck (A9) (LRR F, 6, H) Depleted Batrix (F3) Reduced Vertic (F18) Reduced Vertic		i, B Bopiotion, ra	n rioddod Maint,				
Histic Epipedon (A2) Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR F, G, H) Dark Surface (S7) (LRR G) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Tink Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Tink Carl Surface (A11) Redox Dark Surface (F7) Depleted Below Dark Surface (A11) Redox Dark Surface (F7) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Some Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) Tonk Dark Surface (A12) Depleted Dark Surface (A12) Sandy Mucky Mineral (S1) Some Mucky Peat or Peat (S2) (LRR G, H) Tonk Dark Surface (F7) Some Mucky Peat or Peat (S3) (LRR F) Mucky Peat (S3) (Mucky Peat (S3) (LRR F) Mucky Peat (S3) (Mucky Peat (S4) (S4) (S4) (S4) (S4) (S4) Mucky Mater (S4) (S4) (S4) (S4) (S4) Mucky Mucky Mineral (F2) Mucky Peat (S4) (S4) (S4) (S4) (S4) (S4) (S4) (S4)	•			Sandy Glevi	ed Matrix (S4)		•
Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR G) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) (LRR G) High Plains Depressions (F16) 1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F3) Reduced Vertic (F18) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Red Parent Material (TF2) Thick Dark Surface (A12) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Mucky Mineral (S1) Redox Depressions (F8) Indicators of hydrophylic vegetation and wetland hydrology must be present, unless disturbed or problematic. 8 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) wetland hydrology must be present, unless disturbed or problematic. 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat (R1) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat (R1) (MLRA 72 & 73 of LRR H) 8 cm Mucky Peat (R1) (MLRA 72 & 73 of LRR H) 9 cm Mucky Mineral (R10) (MLRA 72 & 73 of LRR H) 9 cm Mucky Mineral (R10) (MLRA 72 & 7		(A2)	_				
Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Reduced Vertic (F18) Reduced Vertic (F18)			_				
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1 cm Muck (A9) (LRR F, G, H)			_				
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S2) C 5 cm Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S3) (LRR F) Type: Depth (inches): Depleted Dark Surface (F7) MINERA 72 & 73 of LRR H) Type: Depth (inches): Depth (inches)		, , , , ,	-			•	
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Redox Depressions (F8) High Plains Depressions (F16) Sorm Mucky Peat or Peat (S2) (LRR G, H) Type: Depth (inches): Beth (inches): Beth (inches): Wetland Hydrology Indicators Frimary Indicators (minimum of two required) Surface Water (A1) Salt Crust (B11) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Sediment Deposits (B2) Dirift Deposits (B3) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Present? Yes No Depth (inches) Depth (inches) Bepleted Dark Surface (F7) Aligh Plains Deposits (B2) Oddized Rhizospheres on Living Roots (C3) Water Agal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Wetland Hydrology Water Table (Present? Yes No Z Depth (inches) Wetland Hydrology Wetland Hydrology Wetland Hydrology Water Table (Present? Yes No Z Depth (inches) Wetland Hydrology Wetland Hydrology Present? Wetland Hydrology Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Present?			_		,		
Redox Depressions (F8) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 4. High Plains Depressions (F16) 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) Restrictive Layer: (if observed) Type: Depth (inches): Depth (inches): Depth (inches): Depth (inches): Soils not investigated - no dominant hydrophytic vegetatation or wetland hydrology indicators. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Hydrogen Sulfide Odor (C1) Surface Soil Cracks (B6) Hydrogen Sulfide Odor (C1) Water Marks (B1) Dry-Season Water Table (C2) Drift Deposits (B3) (where not tilled) Dry-Season Water (C7) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Iron Deposits (B5) Thin Muck Surface (C7) Water Stained Leaves (B9) First-Heave Hummocks (D7) (LRR F) Field Observations: Surface Water Present? Yes No X Depth (inches) Wetten Alphydrology Wetter Table (Pesent? Yes No X Depth (inches) Wetter Table (Present? Wettand Hydrology Present?			,				• •
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Water-Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR F) Field Observations: Surface Water Present? Yes No X Depth (inches) Wetland Hydrology Present?	Saturation (A3) Water Marks (B1 Sediment Depos Drift Deposits (B	its (B2) 3) st (B4)	F	Ory-Season Wate Oxidized Rhizosphe where not tilled Presence of Red	er Table (C2) eres on Living Roots (C3) U uced Iron (C4)	O R	rainage Patterns (B10) xidized Rhizospheres on Living toots (C3) (where tilled) rayfish Burrows (C8) attraction Visible on Aerial Imagery (C9)
Field Observations: Surface Water Present? Yes No X Depth (inches) Wetland Hydrology Present? Wetland Hydrology Present?	Saturation (A3) Water Marks (B1 Sediment Depos Drift Deposits (B Algal Mat or Crus	its (B2) 3) st (B4)	F	Ory-Season Water Oxidized Rhizosphe where not tilled Presence of Redu Thin Muck Surface	er Table (C2) eres on Living Roots (C3) U) uced Iron (C4) ce (C7)	O R C Ss	rainage Patterns (B10) xidized Rhizospheres on Living boots (C3) (where tilled) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) eomorphic Position (D2)
Surface Water Present? Yes No X Depth (inches) Wetland Hydrology Present? No X Depth (inches) Present?	Saturation (A3) Water Marks (B1 Sediment Depos Drift Deposits (B: Algal Mat or Crus Iron Deposits (B: Inundation Visibl	its (B2) 3) st (B4) 5) e on Aerial Image	F	Ory-Season Water Oxidized Rhizosphe where not tilled Presence of Redu Thin Muck Surface	er Table (C2) eres on Living Roots (C3) U) uced Iron (C4) ce (C7)	O — R C — Si — G Fr	rainage Patterns (B10) xidized Rhizospheres on Living cots (C3) (where tilled) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) AC-Neutral Test (D5)
Water Table Present? Yes No X Depth (inches) Present?	Saturation (A3) Water Marks (B1 Sediment Depos Drift Deposits (B: Algal Mat or Crus Iron Deposits (B: Inundation Visibl Water-Stained Le	its (B2) 3) st (B4) 5) e on Aerial Image	F	Ory-Season Water Oxidized Rhizosphe where not tilled Presence of Redu Thin Muck Surface	er Table (C2) eres on Living Roots (C3) U) uced Iron (C4) ce (C7)	O — R C — Si — G Fr	rainage Patterns (B10) xidized Rhizospheres on Living cots (C3) (where tilled) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9 eomorphic Position (D2) AC-Neutral Test (D5)
water rapie Present:	Saturation (A3) Water Marks (B1 Sediment Depos Drift Deposits (B Algal Mat or Crus Iron Deposits (Bs Inundation Visibl Water-Stained Le	its (B2) 3) st (B4) 5) e on Aerial Image eaves (B9)	Fy (B7)	Ory-Season Water Oxidized Rhizospher Where not tilled Presence of Reduction Thin Muck Surfact Other (Explain in	er Table (C2) eres on Living Roots (C3) uced Iron (C4) ce (C7) Remarks)	O — R C — Si — G Fr	rainage Patterns (B10) xidized Rhizospheres on Living cots (C3) (where tilled) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) AC-Neutral Test (D5) cost-Heave Hummocks (D7) (LRR F)
Saturation Present? (includes capillary fringe) Yes No _X Depth (inches) Yes _X No	Saturation (A3) Water Marks (B1 Sediment Depos Drift Deposits (B: Algal Mat or Crus Iron Deposits (B: Inundation Visibl Water-Stained Li Field Observations: Surface Water Present?	its (B2) 3) st (B4) 5) e on Aerial Image eaves (B9)	Fy (B7)	Ory-Season Water Oxidized Rhizospher Where not tilled Presence of Rediction Muck Surfact Other (Explain in No X	er Table (C2) eres on Living Roots (C3) uced Iron (C4) ce (C7) Remarks) Depth (inches)	O — R C — Si — G Fr	rainage Patterns (B10) xidized Rhizospheres on Living cots (C3) (where tilled) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) AC-Neutral Test (D5) cost-Heave Hummocks (D7) (LRR F) Wetland Hydrology
	Saturation (A3) Water Marks (B1 Sediment Depos Drift Deposits (B Algal Mat or Crus Iron Deposits (B8 Inundation Visibl Water-Stained Le Field Observations: Surface Water Present?	its (B2) 3) st (B4) 5) e on Aerial Image eaves (B9)	YesYes	Ory-Season Water Oxidized Rhizosphe Where not tilled Presence of Redi Thin Muck Surface Other (Explain in No X No X	er Table (C2) eres on Living Roots (C3) uced Iron (C4) ee (C7) Remarks) Depth (inches) Depth (inches)	O — R C — Si — G Fr	rainage Patterns (B10) xidized Rhizospheres on Living cots (C3) (where tilled) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9) ecomorphic Position (D2) AC-Neutral Test (D5) cost-Heave Hummocks (D7) (LRR F) Wetland Hydrology
	Saturation (A3) Water Marks (B1 Sediment Depos Drift Deposits (B Algal Mat or Crus Iron Deposits (B8 Inundation Visibl Water-Stained Le Field Observations: Surface Water Present?	its (B2) 3) st (B4) 5) e on Aerial Image eaves (B9)	YesYes	Ory-Season Water Oxidized Rhizosphe Where not tilled Presence of Redi Thin Muck Surface Other (Explain in No X No X	er Table (C2) eres on Living Roots (C3) uced Iron (C4) ee (C7) Remarks) Depth (inches) Depth (inches)	O — R C — Si — G Fr	rainage Patterns (B10) xidized Rhizospheres on Living cots (C3) (where tilled) rayfish Burrows (C8) aturation Visible on Aerial Imagery (C9 ecomorphic Position (D2) AC-Neutral Test (D5) cost-Heave Hummocks (D7) (LRR F) Wetland Hydrology Present?

Wetland I	Determin	ation Da	ata Forn	n - Grea	nt Plains Reg	ion		
Project/Site: I-25/I-80 Interchange		City/	County: Che	eyenne/La	ıramie	Sampling Da	ate: 7/ :	31/2019
Applicant/Owner: Wyoming Dept. of Tra	nsportation			-	State: WY	Sampling Po	oint:	S-12
Investigator(s): R. Newton, D. Soucy					Section	– n, Township, Range	: S11 T13N	R67W
Landform (hillslope, terrace, etc.): depress	sion	Loc	cal Relief (co	oncave, co	onvex, none):	concave	Slope	(%): 0-2
Subregion (LRR): G - Western Great Plai	ns	Lat.	2225	40.5001	Long:	743436.1994	Datu	m: WYE
Soil Map Unit Name: Merden silty clay loam,	0 to 3 percen	nt slopes				IWI Classification:		JPL
Are climatic/hydrologic conditions on the site t	ypical for this	time of year?	Yes	s X	No (I	lf no, explain in Ren	narks)	
Are Vegetation , Soil , or Hyd	drology	significantly	disturbed? A	Are "Norma	al Circumstances	s" present? Yes)	X No
Are Vegetation , Soil , or Hyd		naturally pro				rplain any answers ι	in Remarks.	
SUMMARY OF FINDINGS - Attach site map		•		ransects.				,
Hydrophytic Vegetation Present? Yes						,		
Hydric Soil Present? Yes		-	le the Sa	moled Are	ea within a Wetla	nd?	Yes X N	No
Wetland Hydrology Present?		-	13 1110 00	inpied Aid	sa witiiii a weta	nu:	<u> </u>	'
Remarks:		-						
Depressional palustrine emergent wetland PE	M-4.							
VEGETATION - Use scientific names of plan								
	Absolute	Dominant	Indicator	Domina	nce Test Works	heet:		
Tree Stratum (Plot size: 30x30 ft)	% Cover	Species?	Status	Number	of Dominant Spe	ecies		
1					OBL, FACW, or	FAC:	2	(A)
2.				(excludii	ng FAC-) :			
3				Total Nu	ımber of Dominaı	nt		
4				Species	Across All Strata	a:	2	(B)
5								
Sapling/Shrub Stratum (Plot size: 15x1	0 = 1 5 ft)	Total Cover			of Dominant Spe e OBL, FACW, or		100%	(A/B)
2.				Prevale	nce Index Work	sheet:		
3.					Total % Cover	of:	Multir	oly by:
4.				OBL	species	0	x 1 =	0
5.				FACW	species	57	x 2 =	114
	0 =	Total Cover		FAC	species	24	x 3 =	72
Herb Stratum (Plot size: 5x5 ft)				FACU	species	0	x 4 =	0
1. Juncus balticus	35	Υ	FACW	UPL	species	5 2	x 5 =	25
2. Mentha arvensis	15	Υ	FACW	Column	Totals:	86	(A)	211 (B)
3. Alopecurus pratensis	7	N	FACW		Preva	lence Index = B/A =	= 2.5	5
4. Euphorbia esula	5	N	NI	Hydrop	nytic Vegetation	Indicators:		
5. Elymus riparius	12	N	FAC		X 1. Rapid Te	est for Hydrophytic	Vegetation	
6. Asclepias speciosa	12	N	FAC		X 2. Dominar	nce Test is >50%.		
7.						nce Index is <3.01		
8.						ogical Adaptations¹		
9.					porting data	a in Remarks or on	a separate	sheet)
0.					Problemati	c Hydrophytic Vege	tation (Expl	ain)
	86 =	Total Cover						
Woody Vine Stratum (Plot size: 30x30 f	<u>t</u>)							
1						ric soil and wetland h		st be
2					present, unless di	sturbed or problemat	ic.	
% Bare Ground in Herb Stratum 14	0	= Total Cove	er		Hydrophytic Vege	etation Present?	XYe	s No
Remarks:								
Species with no indicator (NI) are treated as U	PL for this and	alysis.						

Profile Desci	ription: (Describe t	o the depth	needed to docume	nt the ind	licator or	confirm the absent	ce of indicators.)	
Depth	Matrix		F	Redox Fe	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10 YR 2/2	100					clay loam	
4-16	10 YR 4/2	95	7.5 YR 4/4	5	С	M	Sand	
¹ Type: C=Co	ncentration, D=Dep	oletion, RM=	Reduced Matrix, C	S=Cover	ed or Coa	ated Sand Grains.	² Location: PL=F	Pore Lining, M=Matrix
Hydric Soil I	ndicators		-				Indicato	rs for Problematic Hydric Soils ³ :
-	sol (A1)			Sandy	Gleyed N	лаtrix (S4)	1	cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)		×	_	Redox (S		C	past Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)				ed Matrix	•		ark Surface (S7) (LRR G)
Hydro	gen Sulfide (A4)			_ ``		/lineral (F1)	Hi	gh Plains Depressions (F16)
	ied Layers (A5) (LF	≀R F)			-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	•		_	ed Matrix	` ,	Re	educed Vertic (F18)
	ted Below Dark Sur		·	_ `		face (F6)		ed Parent Material (TF2)
Thick	Dark Surface (A12))		 Deplet	ed Dark S	Surface (F7)		ther (Explain in Remarks)
Sandy	/ Mucky Mineral (S	1)		Redox	Depress	ions (F8)	3Indicato	rs of hydrophylic vegetation and
2.5 cn	n Mucky Peat or Pe	eat (S2) (LR	R G, H)	— High P	lains Dep	pressions (F16)		hydrology must be present, unless
5 cm l	Mucky Peat or Peat	t (S3) (LRR	F)	(MLR	RA 72 & 73	of LRR H)	disturbe	d or problematic.
Restrictive L	ayer: (if observed)							
Type:	, (e.e.e rea/							
Depth (incl	hes):						Hydric Soil	Present? Yes X No
							11,411.0 0011	163_16
Remarks:								
HYDROLOG	Y							
Wetland Hyd	rology Indicators:							
Primary Indica	ators (minimum of o	one is requir	red; check all that a	pply)		Se	econdary Indicator	s (minimum of two required)
Surfac	ce Water (A1)		Sa	It Crust (I	B11)			Surface Soil Cracks (B6)
High \	Water Table (A2)		Aq	uatic Fau	ına (B13)			Sparsley Vegetated Concave Surf. (B8)
Satura	ation (A3)		Hy	drogen S	ulfide Od	or (C1)		Drainage Patterns (B10)
Water	Marks (B1)		Dry	y-Season	Water T	able (C2)		Oxidized Rhizospheres on Living Roots (C3) (where tilled)
	nent Deposits (B2)		Oxi	idized Rhiz	ospheres	on Living Roots (C3)		
Drift D	Deposits (B3)		(w)	here not	tilled)			Crayfish Burrows (C8)
Algal	Mat or Crust (B4)		Pre	esence of	f Reduce	d Iron (C4)		Saturation Visible on Aerial Imagery (C9)
Iron D	eposits (B5)		Thi	in Muck S	Surface (0	C7)	X	Geomorphic Position (D2)
Inunda	ation Visible on Aer	ial Imagery	(B7) Oth	her (Expl	ain in Rer	marks)	X	FAC-Neutral Test (D5)
Water	-Stained Leaves (B	i9)						Frost-Heave Hummocks (D7) (LRR F)
Field Observ	ations:							
Surface Wate	er Present?		Yes	No	<u> </u>	Depth (inches)		Wetland Hydrology
Water Table I	Present?		Yes	No	<u> </u>	Depth (inches)		Present?
Saturation Pro	esent? (includes ca	pillary fringe	e) Yes	No	<u> </u>	Depth (inches)		X Yes No
Remarks:								

				m - Grea	_		
Project/Site: I-25/I-80 Interchange			/County: Ch	neyenne/La		Sampling Date:	
Applicant/Owner: Wyoming Dept. of T	ransportation				State: WY	Sampling Point:	
Investigator(s): R. Newton, D. Soucy			1D 11 11			, Township, Range: S	
	r terrace		,	•	nvex, none):	none	Slope (%):
Subregion (LRR): G - Western Great Pl		Lat	. 223	183.7781	Long:	743476.4361	Datum: WY E
Soil Map Unit Name: Merden silty clay loar	-	-				WI Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for this	•				no, explain in Reman	ks)
Are Vegetation, Soil, or H	lydrology	significantly	disturbed?	Are "Norma	al Circumstances'	' present? Yes	X No
Are Vegetation, Soil, or H	lydrology	naturally pro	oblematic?		(If needed, exp	olain any answers in F	Remarks.)
SUMMARY OF FINDINGS - Attach site ma	p showing sar	npling point	locations,	transects,	important featur	es, etc.	
Hydrophytic Vegetation Present? Yes	No X	_					
Hydric Soil Present? Yes	No X	_	Is the S	ampled Are	ea within a Wetlar	nd? Yes	No X
Wetland Hydrology Present? Yes	No X						
Remarks:							
Paired upland point for PEM-4.							
VEGETATION - Use scientific names of pl				Damir -	nee Teet Meules		
<u>Tree Stratum</u> (Plot size: 30x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status		nce Test Worksh of Dominant Spe		
1	70 0010.	op 00.00.	Julia		OBL, FACW, or		1 (4
2					ng FAC-):	_	
3.				Total Nu	mber of Dominan	+	
4.					Across All Strata		2 (1
5.				'			
	0 =	Total Cover		Doroont	of Dominant Cna	nia a	
Sapling/Shrub Stratum (Plot size: 15:	x15 ft)				of Dominant Spece OBL, FACW, or		50% (A/
1.	,				- , - ,	_	
2.				Prevale	nce Index Works	sheet:	
3.					Total % Cover	of:	Multiply by:
4.				OBL	species	0 x 1	= 0
5.				FACW	species	20 x 2	= 40
	0 =	Total Cover		FAC	species	0 x 3	= 0
Herb Stratum (Plot size: 5x5 ft)				FACU	species	60 x 4	= 240
1. Bromus inermis	4	N	UPL	UPL	species	8 x 5	= 40
2. Euphorbia esula	4	N	NI	Column	Totals:	88 (A) 320
3. Cirsium arvense	55	Υ	FACU		Preval	ence Index = B/A =	3.6
4. Juncus balticus	20	Υ	FACW	Hydropl	nytic Vegetation	Indicators:	
5. Poa pratensis	5	N	FACU		1. Rapid Te	st for Hydrophytic Veg	jetation
6.					2. Dominan	ce Test is >50%.	
7.					3. Prevalen	ce Index is <3.01	
	· · · · · · · · · · · · · · · · · · ·				•	gical Adaptations¹ (Pr	
8.					norting data	in Remarks or on a s	eparate sheet)
					porting data		
9.						: Hydrophytic Vegetati	on (Explain)
9.	88 =	Total Cover					on (Explain)
9.		Total Cover					on (Explain)
9		Total Cover			Problematio		, , ,
9					Problemation Probl	Hydrophytic Vegetati	, , ,
9	0 ft)	Total Cover	er		Problemation Probl	Hydrophytic Vegetati	, , ,
9	O ft)		er		Problemation Probl	: Hydrophytic Vegetati ic soil and wetland hydro turbed or problematic.	, , ,
9	0 ft)		er		Problemation Probl	: Hydrophytic Vegetati ic soil and wetland hydro turbed or problematic.	ology must be

Profile Descr								
Depth	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	10 YR 3/3	100					sandy clay	
							- IUaiii	
		 -						
¹Type: C=Co	ncentration, D=Deple	etion RM=	Reduced Matrix	CS=Cover	ed or Coat	ted Sand Grains	² l ocation: Pl =	Pore Lining, M=Matrix
Hydric Soil In	<u> </u>			,				rs for Problematic Hydric Soils ³ :
-	sol (A1)			Sandv	Gleyed M	atrix (S4)		cm Muck (A9) (LRR I, J)
	Epipedon (A2)				Redox (S			oast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		-		ed Matrix (-		ark Surface (S7) (LRR G)
	gen Sulfide (A4)		-		/ Mucky Mi	,		igh Plains Depressions (F16)
	ied Layers (A5) (LRF	R F)	-		/ Gleyed M		<u></u> ''	(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, G	-	-		ted Matrix (D	educed Vertic (F18)
	ted Below Dark Surfa		-		Dark Surf			ed Parent Material (TF2)
	Dark Surface (A12)	acc (ATT)	-			urface (F7)		other (Explain in Remarks)
	Mucky Mineral (S1)	١	-		Depression			,
Candy			RGH)			ressions (F16)		ors of hydrophylic vegetation and hydrology must be present, unless
2.5 cm	n Mucky Peat or Pea			i ngi i	iaii is Dcpi	C3310113 (1 10)	Wetland	nyarology mast be present, amess
	n Mucky Peat or Pea Mucky Peat or Peat (-	(MIR	RΔ 72 & 73 a	of LRR H)	disturbe	d or problematic.
	n Mucky Peat or Peat Mucky Peat or Peat		-	(MLF	RA 72 & 73 (of LRR H)	disturbe	d or problematic.
5 cm l	-		-	(MLF	RA 72 & 73 (of LRR H)	disturbe	d or problematic.
5 cm PRestrictive L	Mucky Peat or Peat (-	(MLF	RA 72 & 73 (of LRR H)	disturbe	d or problematic.
5 cm f	Mucky Peat or Peat (-	(MLF	RA 72 & 73 (of LRR H)	disturbe	
5 cm PRestrictive L	Mucky Peat or Peat (-	(MLF	RA 72 & 73 (of LRR H)		
5 cm PRestrictive LType: Depth (inch	Mucky Peat or Peat (-	(MLF	RA 72 & 73 (of LRR H)		
5 cm MRestrictive L Type: Depth (inch Remarks:	Mucky Peat or Peat (ayer: (if observed) nes):		-	(MLF	RA 72 & 73 6	of LRR H)		
5 cm MRestrictive L Type: Depth (inch Remarks:	Mucky Peat or Peat (ayer: (if observed) nes):		-	(MLF	RA 72 & 73 o	of LRR H)		
5 cm MRestrictive L Type: Depth (inch Remarks: HYDROLOG) Wetland Hyd	Mucky Peat or Peat (ayer: (if observed) nes): Y rology Indicators:	(S3) (LRR I			RA 72 & 73 o		Hydric Soi	I Present? Yes No X
5 cm MRestrictive L Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica	Mucky Peat or Peat (ayer: (if observed) nes): Y rology Indicators: ators (minimum of or	(S3) (LRR I	ed; check all tha	t apply)			Hydric Soi	I Present? Yes No X
5 cm MRestrictive L Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface	Mucky Peat or Peat (ayer: (if observed) nes): Y rology Indicators: ators (minimum of or be Water (A1)	(S3) (LRR I	ed; check all tha	<i>t apply)</i> Salt Crust (l	B11)		Hydric Soi	I Present? Yes No X The set (minimum of two required) Surface Soil Cracks (B6)
5 cm MRestrictive L Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surfac High V	Mucky Peat or Peat of Ager: (if observed) mes): rology Indicators: ators (minimum of or one Water (A1) Nater Table (A2)	(S3) (LRR I	ed; check all tha	<i>t apply)</i> Salt Crust (l Aquatic Fau	B11) una (B13)	s	Hydric Soi	I Present? Yes No X This is (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
5 cm MRestrictive L Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surfac High V Satura	Mucky Peat or Peat of Ager: (if observed) The solution (i	(S3) (LRR I	ed; check all tha	<i>t apply)</i> Salt Crust (l Aquatic Fau	B11) una (B13) Sulfide Odo	S or (C1)	Hydric Soi	I Present? Yes No X Is (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
5 cm MRestrictive L Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surfac High V Satura Water	Mucky Peat or Peat (ayer: (if observed) res): Y rology Indicators: ators (minimum of or be Water (A1) Nater Table (A2) ation (A3) Marks (B1)	(S3) (LRR I	ed; check all tha	<i>t apply)</i> Salt Crust (l Aquatic Fau Hydrogen S Dry-Season	B11) una (B13) Sulfide Odo n Water Ta	S or (C1) ble (C2)	Hydric Soi	I Present? Yes No X This is (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
5 cm MRestrictive L Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surfac High V Satura Water Sedim	Aucky Peat or Peat of August (if observed)	(S3) (LRR I	ed; check all tha	<i>t apply)</i> Salt Crust (l Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz	B11) una (B13) Sulfide Odo n Water Ta	S or (C1)	Hydric Soi	I Present? Yes No X Is (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
5 cm Mestrictive L Type: Depth (inch Remarks: HYDROLOG) Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D	Aucky Peat or Peat of August (if observed)	(S3) (LRR I	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz	B11) una (B13) ulfide Odo u Water Ta	S or (C1) ble (C2) n Living Roots (C3)	Hydric Soi	I Present? Yes No X Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
5 cm Mestrictive L Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D Algal I	Aucky Peat or Peat of August (if observed)	(S3) (LRR I	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not	B11) una (B13) Sulfide Odo n Water Ta zospheres of tilled) f Reduced	or (C1) ble (C2) n Living Roots (C3)	Hydric Soi	I Present? Yes No X Ses (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
5 cm Mestrictive L Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D Algal Mestriction D	Aucky Peat or Peat of Auger: (if observed)	ne is require	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence o	B11) Juna (B13) Sulfide Odo To Water Ta Zospheres of tilled) f Reduced Surface (C	Sor (C1) ble (C2) n Living Roots (C3) Iron (C4) 7)	Hydric Soi	I Present? Yes No X S (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
5 cm Mestrictive L Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D Algal Mestriction D	Aucky Peat or Peat of August (if observed)	ne is require	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not	B11) Juna (B13) Sulfide Odo To Water Ta Zospheres of tilled) f Reduced Surface (C	Sor (C1) ble (C2) n Living Roots (C3) Iron (C4) 7)	Hydric Soi	I Present? Yes No X Ses (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
5 cm Mestrictive L Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D Algal Methods	Aucky Peat or Peat of Auger: (if observed)	ne is require	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence o	B11) Juna (B13) Sulfide Odo To Water Ta Zospheres of tilled) f Reduced Surface (C	Sor (C1) ble (C2) n Living Roots (C3) Iron (C4) 7)	Hydric Soi	I Present? Yes No X S (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Field Observ	Mucky Peat or Peat of ayer: (if observed) Ayer: (i	ne is require	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence of Thin Muck S Other (Expl	B11) una (B13) Sulfide Odo n Water Ta zospheres or tilled) f Reduced Surface (C ain in Rem	Sor (C1) ble (C2) n Living Roots (C3) Iron (C4) 7) narks)	Hydric Soi	I Present? Yes No X Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
5 cm Mestrictive L Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D Algal Methods Iron D Inunda Water Field Observ Surface Water	Aucky Peat or Peat of ayer: (if observed) Aper: (i	ne is require	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence or Thin Muck S Other (Expl	B11) una (B13) Sulfide Odo n Water Ta zospheres on tilled) f Reduced Surface (C ain in Rem	Sor (C1) ble (C2) In Living Roots (C3) Iron (C4) 7) Parks)	Hydric Soi	I Present? Yes No X Ses (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology
5 cm Mestrictive L Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indication Surface High V Saturation Water Sedim Drift D Iron D Inundation Water Field Observ Surface Water Water Table F	Aucky Peat or Peat of ayer: (if observed) Aper: (i	al Imagery (ed; check all that	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence of Thin Muck S Other (Expl.	B11) una (B13) Sulfide Odo n Water Ta zospheres on tilled) f Reduced Surface (C ain in Rem	Sor (C1) ble (C2) n Living Roots (C3) Iron (C4) 7) narks)	Hydric Soi	I Present? Yes No X Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland D	eterminatio	n Data For	m - Grea	t Plains Regio	on		
Project/Site: I-25/I-80 Interchange		City/County: C	heyenne/La	ramie	Sampling Date	7/31/2019	,
Applicant/Owner: Wyoming Dept. of Tran	sportation			State: WY	Sampling Point	: S-14	
Investigator(s): R. Newton, D. Soucy				Section,	Township, Range: S	11 T13N R67W	
Landform (hillslope, terrace, etc.): minor de	epression	Local Relief (concave, co	nvex, none):	concave	Slope (%): 0-	·1
Subregion (LRR): G - Western Great Plain	s	Lat. 22	3294.596	Long:	743570.1626	Datum: WY	E
Soil Map Unit Name: Poposhia-Trimad comple	ex, 3 to 15 percent	slopes		NV	VI Classification:	UPL	
Are climatic/hydrologic conditions on the site ty	pical for this time o	f year? Y	es X	No (If	no, explain in Remai	rks)	
Are Vegetation, Soil, or Hydr	ologysignif	cantly disturbed?	Are "Norma	al Circumstances"	present? Yes	_X No	
Are Vegetation , Soil , or Hydr	ology natur	ally problematic?		(If needed, exp	lain any answers in l	Remarks.)	
SUMMARY OF FINDINGS - Attach site map s	howing sampling	point locations,	transects, i	important feature	es, etc.		
Hydrophytic Vegetation Present? Yes X	. No						
Hydric Soil Present? Yes	No X	Is the S	Sampled Are	a within a Wetland	d? Yes	s No X	
Wetland Hydrology Present? Yes X	 		·				•
Remarks:							
				,			
Depressional area with dominant hydrophytic ve		ina hydrology but	lacking hydi	ric soils.			
VEGETATION - Use scientific names of plant		ant last t	Domina	nce Test Worksh	eet:		—
Tree Stratum (Plot size: 30x30 ft)	Absolute Domir % Cover Speci			of Dominant Spec			
1				OBL, FACW, or F		1	(A)
2.			(excludin	ng FAC-):			. ,
3.			Total Nu	mber of Dominant			
4.		<u> </u>	•	Across All Strata:		1	(B)
		<u> </u>	• '		_		. ,
Sapling/Shrub Stratum (Plot size: 15x15	0 = Total (Cover		of Dominant Spec OBL, FACW, or F		100% (A	/B)
2.			Prevaler	nce Index Works	neet:		
3.				Total % Cover o	f:	Multiply by:	
4			OBL	species	0 x 1	0	_
5			FACW	species	79 x 2		_
_	0 = Total (Cover		species	0 x 3	3 = 0	
Herb Stratum (Plot size: 5x5 ft)				species	10 x 4		_
Distichlis spicata	75 Y		•	species	0 x 5		-
2. Hordeum jubatum	4 N		Column		<u>89</u> (A		(B)
3. Elymus repens	10 N	FACU	. 		nce Index = B/A =	2.2	
4			Hydroph	nytic Vegetation I			
5			. -		t for Hydrophytic Ve	getation	
6			. -	X 2. Dominand			
7			. -		e index is <u><</u> 3.0 [.] gical Adaptations¹ (Pi	rovide sun-	
8			. .		in Remarks or on a s		
9					Hydrophytic Vegetat		
0	89 = Total (Cover	· -	FIODIEITIALIC	riyuropriyiic vegetat	ion (Explain)	
Woody Vine Stratum (Plot size: 30x30 ft		30701					
1	- ′			1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
]			•	•	soil and wetland hydi urbed or problematic.	ology must be	
-	0 = Tota	al Cover		F. 200.10, WINCOO WISE			
% Bare Ground in Herb Stratum 11				Hydrophytic Veget	ation Present?	X Yes	No
				, , , , , , , , , , , , , , , , , , , ,			•
Remarks:							—
-							

Depth	Matrix			Redox Fe	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10 YR 4/2	100					clay loam	
6			_					shovel refusal
			_					
			_					
¹ Type: C=Co	oncentration, D=Dep	oletion. RM=F	Reduced Matrix.	CS=Cover	ed or Coa	ated Sand Grains.	² Location: PL	=Pore Lining, M=Matrix
Hydric Soil I	·	,	,					tors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandv	Gleved N	Matrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		Redox (S			Coast Prairie Redox (A16) (LRR F, G, I
	Histic (A3)		_		ed Matrix	,		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)		_			lineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LR	RF)	_		•	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F ,	•	_		ed Matrix			Reduced Vertic (F18)
	eted Below Dark Sur		_			face (F6)		Red Parent Material (TF2)
	Dark Surface (A12)		_			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S1	•	_		Depressi	` '	3	•
	y ividoky iviliteral (O	')				ressions (F16)		ators of hydrophylic vegetation and nd hydrology must be present, unless
	m Mucky Peat or Pe	at (S2) (I RR	(G H)			103310113 (1 10)	wetiai	ia nyarology mast be present, amess
2.5 cr	m Mucky Peat or Pe Mucky Peat or Peat		_			of LRR H)	distur	bed or problematic.
2.5 cm	Mucky Peat or Peat		_			of LRR H)	distur	bed or problematic.
2.5 cm	-		_			of LRR H)	distur	bed or problematic.
2.5 cm 5 cm Restrictive L	Mucky Peat or Peat _ayer: (if observed)		_			of LRR H)		
2.5 cm 5 cm	Mucky Peat or Peat _ayer: (if observed)		_			of LRR H)		oil Present? Yes No
2.5 cm 5 cm Restrictive L	Mucky Peat or Peat _ayer: (if observed)		_			of LRR H)		
2.5 cm 5 cm Restrictive L Type: Depth (inc.)	Mucky Peat or Peat _ayer: (if observed)		_			of LRR H)		
2.5 cm 5 cm Restrictive L Type: Depth (inc.	Mucky Peat or Peat ayer: (if observed) hes):		_			of LRR H)		
2.5 cm 5 cm Type: Depth (inc.) Remarks:	Mucky Peat or Peat ayer: (if observed) hes):	t (S3) (LRR F	_			of LRR H)		
2.5 cm 5 cm Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc	Mucky Peat or Peat ayer: (if observed) hes):	t (S3) (LRR F		(MLR			Hydric S	
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc	Mucky Peat or Peat Layer: (if observed) thes): Y drology Indicators: eators (minimum of contents)	t (S3) (LRR F	ed; check all that	(MLR	A 72 & 73		Hydric S	oil Present? Yes No
2.5 cm 5 cm Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic	Mucky Peat or Peat Layer: (if observed) thes): Y drology Indicators: cators (minimum of companion of comp	t (S3) (LRR F	ed; check all that	apply) alt Crust (E	A 72 & 73		Hydric S	oil Present? Yes No ors (minimum of two required) Surface Soil Cracks (B6)
2.5 cm 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of occe Water (A1) Water Table (A2)	t (S3) (LRR F	ed; check all that	apply) alt Crust (E	A 72 & 73	S	Hydric S	oil Present? Yes No ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8
2.5 cm 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High V Satur	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Cators (minimum of companion of com	t (S3) (LRR F	ed; check all that	apply) alt Crust (I quatic Fau	311) ana (B13) ulfide Od	S or (C1)	Hydric S	oil Present? Yes No ors (minimum of two required) Surface Soil Cracks (B6)
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High Satura Water	Mucky Peat or Peat Layer: (if observed) hes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	t (S3) (LRR F	ed; check all that	apply) alt Crust (Equatic Fau	311) ina (B13) ulfide Od Water Ta	or (C1) able (C2)	Hydric S econdary Indicat	oil Present? Yes No Fors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
2.5 cm 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Saturar Watel Sedin	Mucky Peat or Peat Layer: (if observed) Thes): Y Arology Indicators: cators (minimum of occewater (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2)	t (S3) (LRR F	ed; check all that	apply) alt Crust (Equatic Faullydrogen Sery-Season	B11) Ina (B13) ulfide Od Water Ta	S or (C1)	Hydric S econdary Indicat	oil Present? Yes No ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livin
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Watel Sedin Drift E	Mucky Peat or Peat Layer: (if observed) Hes): Y Arology Indicators: cators (minimum of companies) cators (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3)	t (S3) (LRR F	ed; check all that S A C C C C C C C C	apply) alt Crust (Equatic Faullydrogen Solry-Season widized Rhiz	B11) Ina (B13) Iulfide Od Water Ta	or (C1) able (C2) on Living Roots (C3)	Hydric S econdary Indicat	oil Present? Yes No ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B6 Drainage Patterns (B10) Oxidized Rhizospheres on Livin Roots (C3) (where tilled) Crayfish Burrows (C8)
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2.5 cm 5 cm Festrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Water Sedin Drift D Algal Iron D Inund Water	Mucky Peat or Peat Layer: (if observed) Hes): Y Arology Indicators: Lators (minimum of complete (A2) Lation (A3) In Marks (B1) Lation (B3) Mat or Crust (B4) Lation Visible on Aer r-Stained Leaves (B4)	t (S3) (LRR F	ed; check all that A C C C C C C C C C C C C	apply) alt Crust (Equatic Faulydrogen Sory-Season ixidized Rhizwhere not dresence of thin Muck Some	B11) Ina (B13) Illide Od Water Ta cospheres of tilled) F Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicat	oil Present? Yes No ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B6) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imageny (C Geomorphic Position (D2)
2.5 cm 5 cm Festrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift D Algal Iron D Inund Water Field Observ	Mucky Peat or Peat Layer: (if observed) Area (if observed) Y Arology Indicators: Lators (minimum of oce Water (A1) Water Table (A2) Lation (A3) In Marks (B1) Lenent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aer In-Stained Leaves (B Vations:	t (S3) (LRR F	cd; check all thatS	apply) alt Crust (Equatic Faulydrogen Soly-Season widized Rhizemence of hin Muck Solther (Explain)	A 72 & 73 A 72 & 73 Barrier Strate of the company	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) narks)	econdary Indicat	oil Present? Yes No Prose (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B6) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) (FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRF
2.5 cm 5 cm Festrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Surfac High V Satur: Water Sedin Drift E Algal Iron E Inund Water Field Observ Surface Water	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of of ce Water (A1) Water Table (A2) Lation (A3) If Marks (B1) Leposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aer In-Stained Leaves (B Vations: Ler Present?	t (S3) (LRR F	ed; check all that A B C () P B7) Yes	apply) alt Crust (Equatic Faully (Equatic Faul	B11) Ina (B13) Ulfide Od Water Ta ospheres of tilled) FReduced Gurface (Cain in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) narks)	econdary Indicat	oil Present? YesNo ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B6) Drainage Patterns (B10) Oxidized Rhizospheres on Livin Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) (FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRF
2.5 cm 5 cm Festrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High V Satur: Water Sedin Drift I Algal Iron I Inund Water Field Observ Surface Water Water Table	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of of ce Water (A1) Water Table (A2) Lation (A3) If Marks (B1) Leposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aer In-Stained Leaves (B Vations: Ler Present?	t (S3) (LRR F	ed; check all that S A B F C G (G T B F T S Yes Yes Yes	apply) alt Crust (Equatic Faulydrogen Sory-Season widized Rhizwhere not bresence of hin Muck Souther (Explain No	A 72 & 73 A 73 A 74 A 75	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) narks)	econdary Indicat	oil Present? Yes No Prose (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B6) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) (FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRF

Wetland I	Determin	ation Da	ata Forn	n - Gre	at Plains Reg	ion		
Project/Site: I-25/I-80 Interchange		City	/County: Ch	eyenne/L	aramie	Sampling D	Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Tra	nsportation			-	State: WY	Sampling P	oint:	S-15
Investigator(s): R. Newton, D. Soucy					Section	- ı, Township, Rang	e: S11 T1	3N R67W
Landform (hillslope, terrace, etc.): depress	sion	Lo	cal Relief (c	oncave, c	onvex, none):	concave	Slo	pe (%): 0-2
Subregion (LRR): G - Western Great Plai	ns	Lat	. 2232	288.1983	Long:	743570.0458		atum: WYE
Soil Map Unit Name: Merden silty clay loam,	0 to 3 percen	nt slopes			N	WI Classification:	PE	EMA/PEMC
Are climatic/hydrologic conditions on the site t	ypical for this	time of year	? Yes	s X	No (/	f no, explain in Re	emarks)	
Are Vegetation , Soil , or Hyd	drology	significantly	disturbed?	Are "Norm	al Circumstances	" present? Yes	,	X No
Are Vegetation , Soil , or Hyd		naturally pro				plain any answers	in Pema	
SUMMARY OF FINDINGS - Attach site map		-		ranaaata			in Kemai	ns.)
-		iipiiiig poiiit	iocations, t	i alisecis,	important reatur	ies, etc.		
Hydrophytic Vegetation Present? Yes		-	0			10	., .,	
Hydric Soil Present? Yes		-	is the Sa	ampled Ar	ea within a Wetlaı	nd?	Yes X	No
Wetland Hydrology Present? Yes	X No	-						
Remarks:	NA 5 in abodina		on and how NIVA	Las DEM				
Depressional palustrine emergent wetland PE		an area ma	ppea by NVV	I as PEM.				
VEGETATION - Use scientific names of plan		<u> </u>		Domina	nce Test Works	haati		
Tree Stratum (Plot size: 30x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status		of Dominant Spe			
1.		•			e OBL, FACW, or			1 (A)
2.				(exclud	ng FAC-):			` '
3.				Total Ni	umber of Dominar	nt		
4.					Across All Strata			1 (B)
5.				'				` '
Sapling/Shrub Stratum (Plot size: 15x1	0 = 5 ft)	Total Cover			of Dominant Spe e OBL, FACW, or		10	00% (A/B)
1								
2				Prevale	nce Index Works			1
3					Total % Cover			ıltiply by:
4				OBL	species	8	<u>x</u> 1 =	8
5				FACW	species	88	<u>x</u> 2 =	176
	0 =	Total Cover		FAC	species	0	<u>x</u> 3 =	0
Herb Stratum (Plot size: 5x5 ft)			= 4 0 14 /	FACU	species	0	<u>x</u> 4 =	0
1. Distichlis spicata	65	<u>Y</u>	FACW	UPL	species	0	x 5 =	0 (7)
2. Puccinellia nuttalliana	8	N	OBL	Column		96	(A)	184 (B)
3. Hordeum jubatum	5	N	FACW			lence Index = B/A	-	1.9
4. Juncus balticus	18	N	FACW	Hyarop	hytic Vegetation			
5						est for Hydrophytic	vegetatio	on
6.						ice Test is >50%.		
7						ice Index is <u><</u> 3.0¹ ogical Adaptations	·1 (Provide	a cun-
8						a in Remarks or o		
9								
10.	96 =	Total Cover			Problematic	c Hydrophytic Veg	etation (E	.хріаіп)
Woody Vine Stretum (Diet size) 20v20 f		Total Cover						
Woody Vine Stratum (Plot size: 30x30 f)				4			
1						ric soil and wetland		must be
2		T. t. l. O.			present, unless dis	sturbed or problema	atic.	
% Bare Ground in Herb Stratum 4	0 %	= Total Cov	er		Hydrophytic Vege	tation Present?	X	YesNo
Remarks:								
. Condition								

	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10 YR 3/2	100					Clay	
3-7	10 YR 4/2	100					Clay	
7-15	10 YR 7/1	100					Clay	
¹ Type: C=C	oncentration, D=Dep	pletion, RM=	Reduced Matrix,	CS=Cover	ed or Coa	ited Sand Grains.	² Location: PL	=Pore Lining, M=Matrix
Hydric Soil	Indicators						Indica	tors for Problematic Hydric Soils ³ :
Histo	sol (A1)			Sandy	Gleyed M	latrix (S4)		1 cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)		_	Sandy	Redox (S	55)		Coast Prairie Redox (A16) (LRR F, G, H)
Black	Histic (A3)		_	Strippe	ed Matrix	(S6)		Dark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)		_	Loamy	/ Mucky M	lineral (F1)		High Plains Depressions (F16)
Strati	fied Layers (A5) (LF	RR F)	_	Loamy	/ Gleyed N	//atrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F,	G , H)	_	X Deplet	ted Matrix	(F3)		Reduced Vertic (F18)
Deple	eted Below Dark Sui	rface (A11)	_	Redox	Dark Sur	face (F6)		Red Parent Material (TF2)
Thick	Dark Surface (A12))	_	Deplet	ted Dark S	Surface (F7)		Other (Explain in Remarks)
Sand	y Mucky Mineral (S	1)	_	Redox	Depressi	ons (F8)	³ Indica	ators of hydrophylic vegetation and
2.5 c	m Mucky Peat or Pe	eat (S2) (LR I	R G, H)	High F	Plains Dep	ressions (F16)		nd hydrology must be present, unless
		+ (C2) /I DD	F)	(MLF	RA 72 & 73	of LRR H)	distur	ped or problematic.
5 cm	Mucky Peat or Pea	t (33) (LKK	• /	,				
	-							
Restrictive I	Layer: (if observed)							
Restrictive I	Layer: (if observed)						Hydric S	oil Present? Yes Y No
Restrictive I Type: Depth (inc	Layer: (if observed)			`			Hydric S	oil Present? Yes X No _
Restrictive I Type: Depth (inc	Layer: (if observed)			`			Hydric S	oil Present? Yes <u>X</u> No
Restrictive I Type: Depth (inc	Layer: (if observed)						Hydric S	oil Present? Yes X No
Restrictive I Type: Depth (inc Remarks:	Layer: (if observed)						Hydric S	oil Present? Yes X No
Restrictive I Type: Depth (inc.) Remarks:	Layer: (if observed)						Hydric S	oil Present? Yes X No
Restrictive I Type: Depth (inc) Remarks: HYDROLOG	Layer: (if observed)	:				s		oil Present? Yes X No
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd	Layer: (if observed) ches):	:	red; check all that			S		
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary India Surfa	Layer: (if observed) shes): Y drology Indicators: cators (minimum of cators)	:	red; check all that	f apply)	B11)	S		ors (minimum of two required)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indid Surfa High	ches): GY drology Indicators: cators (minimum of other cators) acce Water (A1)	:	red; check all that	t apply) Salt Crust (B11) una (B13)			ors (minimum of two required) Surface Soil Cracks (B6)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary India Surfa High Satur	ches): drology Indicators: cators (minimum of once Water (A1) Water Table (A2)	:	red; check all that	t <i>apply)</i> Salt Crust (Aquatic Fau	B11) una (B13) Sulfide Ode	or (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	cators (minimum of of cators (A1) Water Table (A2) ration (A3)	:	red; check all that	<i>t apply)</i> Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor	B11) una (B13) Sulfide Odi n Water Ta	or (C1)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary India Surfa High Satur Wate Sedir	ches): GY drology Indicators: cators (minimum of other (A1)) Water Table (A2) ration (A3) or Marks (B1)	:	red; check all that	<i>t apply)</i> Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor	B11) una (B13) Sulfide Odo n Water Ta	or (C1) able (C2)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift	ches): drology Indicators: cators (minimum of of other Table (A2) ration (A3) or Marks (B1) ment Deposits (B2)	:	red; check all that	t apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhiz	B11) Juna (B13) Sulfide Ode Water Ta zospheres of tilled)	or (C1) able (C2) on Living Roots (C3)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal	ches): GY drology Indicators: cators (minimum of of other (A1)) Water Table (A2) cation (A3) or Marks (B1) ment Deposits (B2) Deposits (B3)	:	red; check all that X S H C C C	t apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhiz where not	B11) una (B13) Sulfide Ode n Water Ta zospheres d tilled) f Reduced	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indid Surfa High Satur Wate Sedir Drift I X Algal Iron I	ches): GY drology Indicators: cators (minimum of other (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	: one is requir	red; check all that X S A C C C C T	t apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhiz where not	B11) Juna (B13) Sulfide Ode To Water Ta Zospheres of tilled) f Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inunc	ches): Carrier (if observed) Ches): Carrier (And Carri	: one is requir	red; check all that X S A C C C C T	t apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhiz where not Presence o	B11) Juna (B13) Sulfide Ode To Water Ta Zospheres of tilled) f Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C4) Geomorphic Position (D2)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I	ches): drology Indicators: cators (minimum of other): water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer	: one is requir	red; check all that X S A C C C C T	t apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhiz where not Presence o	B11) Juna (B13) Sulfide Ode To Water Ta Zospheres of tilled) f Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C4) Geomorphic Position (D2) (C5) FAC-Neutral Test (D5)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inunc	Adrology Indicators: cators (minimum of other (A1) Water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer or-Stained Leaves (E	: one is requir	red; check all that X S A C C C C T	t apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhiz where not Presence o	B11) Juna (B13) Sulfide Ode Nater Ta Zospheres of tilled) f Reduced Surface (Cain in Ren	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indid Surfa High Satur Wate Sedir Drift I X Algal Iron I Inunc Wate Field Obser Surface Wat Water Table	ches): Carry Carry Carry Carry Cators (minimum of of or carry) Cators (Minimum of or carry) Cators (Minimum of or carry) Cators (Minimum of or carry) Cators (Ma) Ca	: one is requir rial Imagery 39)	red; check all that X S A B C (B7) Yes Yes Yes	t apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhiz where not Presence o Thin Muck S Dther (Expl	B11) una (B13) Sulfide Ode twater Ta zospheres of tilled) f Reduced Surface (Cain in Ren	or (C1) able (C2) on Living Roots (C3) I Iron (C4) C7) narks)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determina	ation Da	ata Forn	n - Grea	at Plains Reg	ion			
Project/Site: I-25/I-80 Interchange		City/	County: Ch	eyenne/La	aramie	Sampling D	ate:	7/31/2019	
Applicant/Owner: Wyoming Dept. of Tra	ansportation				State: WY	− Sampling P	oint:	S-16	
Investigator(s): R. Newton, D. Soucy					Section	– n, Township, Range	e: S11 T1	3N R67W	
Landform (hillslope, terrace, etc.): knoll		Lo	cal Relief <i>(c</i> o	oncave, co	onvex, none):	none	Slo	pe (%): 0-3	}
Subregion (LRR): G - Western Great Pla	ins	Lat.	2226	671.8173	Long:	743966.99	Da	atum: WY E	:
Soil Map Unit Name: Merden silty clay loam	, 0 to 3 percent	slopes			<u>N</u>	IWI Classification:		UPL	
Are climatic/hydrologic conditions on the site	typical for this ti	me of year?	Yes	s X	No (lf no, explain in Re	marks)		
Are Vegetation , Soil , or Hy	drology s	significantly	disturbed? A	Are "Norm	al Circumstances	s" present? Yes		X No	
Are Vegetation , Soil , or Hy		naturally pro	blematic?		(If needed, ex	cplain any answers	in Remai	rks.)	
SUMMARY OF FINDINGS - Attach site map		• •		ransects.				,	
Hydrophytic Vegetation Present? Yes			,	•	•	· ·			
Hydric Soil Present? Yes	No X		Is the Sa	ampled Ar	ea within a Wetla	nd?	Yes	No X	
Wetland Hydrology Present? Yes	No X		13 1110 06	inpica Air	ca within a wetta	nu:		- NO X	
Remarks:									
Paired upland point for PEM-5.									
VEGETATION - Use scientific names of pla	nts.								
VEGETATION - 036 3016Hante Hantes of pla		Dominant	Indicator	Domina	nce Test Works	heet:			
Tree Stratum (Plot size: 30x30 ft)		Species?	Status		of Dominant Spe				
1.					e OBL, FACW, or	FAC:		1 (4	A)
2.				(excludi	ng FAC-):				
3.				Total Nu	umber of Domina	nt			
4.				Species	Across All Strata	a:		1 (6	B)
5.							·		
Sapling/Shrub Stratum (Plot size: 15x ⁻¹	0 = T 15 ft)	otal Cover			of Dominant Spe e OBL, FACW, or		10	0% (A/	B)
2.				Prevale	nce Index Work	sheet:			
3.					Total % Cover	of:	Mu	Itiply by:	
4.				OBL	species	0	x 1 =	0	_
5.				FACW	species	50	x 2 =	100	
	0 = T	otal Cover		FAC	species	0	x 3 =	0	
<u>Herb Stratum (</u> Plot size: 5x5 ft)				FACU	species	24	x 4 =	96	
1. Juncus balticus	45	Υ	FACW	UPL	species	12	x 5 =	60	
2. Cirsium arvense	15	N	FACU	Column	Totals:	86	(A)	256	(B)
3. Euphorbia esula	12	N	NI		Preva	lence Index = B/A	=	3.0	
4. Hordeum jubatum	5	N	FACW	Hydrop	hytic Vegetation	Indicators:			
5. Thlaspi arvense	4	N	FACU		X 1. Rapid Te	est for Hydrophytic	Vegetation	on	
6. Poa pratensis	5	N	FACU		X 2. Dominar	nce Test is >50%.			
7.					X 3. Prevaler	nce Index is <3.01			
8.						ogical Adaptations			
9.					porting data	a in Remarks or or	n a separa	ite sheet)	
10.					Problemati	c Hydrophytic Veg	etation (E	xplain)	
	86 = T	otal Cover							
Woody Vine Stratum (Plot size: 30x30	ft)								
1					¹ Indicators of hyd	ric soil and wetland	hydrology	must be	
2					present, unless di	sturbed or problema	atic.		
_		= Total Cove	er						
% Bare Ground in Herb Stratum 1	4 %				Hydrophytic Vege	etation Present?	X	YesI	No
Remarks:									
Species with no indicator (NI) are treated as L	JPL for this anal	lysis.							

SOIL

Sampling Point: S-16

	Matrix			Redox Fe	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10 YR 3/2	100					sandy ciay	
2-18	10 YR 4/4	100					Sand	
¹ Type: C=Cc	oncentration, D=Dep	oletion RM:	=Reduced Matrix (S=Cover	ed or Coat	ed Sand Grains	² l ocation: Pl =	Pore Lining, M=Matrix
Hydric Soil I			Troduced Matrix,			Cu Curia Crairio.		
•	sol (A1)			Sandy	Gleyed Ma	atrix (S4)		ors for Problematic Hydric Soils ³ : L cm Muck (A9) (LRR I, J)
					Redox (S5			
	Epipedon (A2)		_		ed Matrix (S			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		_		`	,		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)	D E\	_	_ ′	Mucky Mi	` '	'	High Plains Depressions (F16)
	fied Layers (A5) (LF				Gleyed M		_	(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,		_		ed Matrix (•		Reduced Vertic (F18)
	eted Below Dark Sur	, ,	_		Dark Surfa			Red Parent Material (TF2)
	Dark Surface (A12)		_			urface (F7)	(Other (Explain in Remarks)
	y Mucky Mineral (S	•		_	Depressio	` ,		ors of hydrophylic vegetation and
	m Mucky Peat or Pe		_			essions (F16)		I hydrology must be present, unless ed or problematic.
	Mucky Peat or Peat	i (53) (LRR	(F)	(IVILK	A 72 & 73 c	OT LKK H)		
5 (111								
	_ayer: (if observed)							
Restrictive L	_ayer: (if observed)						Hydric So	il Present? Yes No_X
Restrictive L	_ayer: (if observed)						Hydric So	il Present? Yes No _X
Restrictive L Type: Depth (inc.	_ayer: (if observed)						Hydric So	il Present? Yes No X
Restrictive L Type: Depth (inc.) Remarks:	.ayer: (if observed) hes):						Hydric So	il Present? Yes No X
Restrictive L Type: Depth (inc. Remarks:	_ayer: (if observed) hes):						Hydric So	il Present? Yes No X
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd	Ayer: (if observed) hes): Y drology Indicators:							
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of o					s		rs (minimum of two required)
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of o		S	alt Crust (E	•	S		rs (<i>minimum of two required</i>) Surface Soil Cracks (B6)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2)		S	alt Crust (E quatic Fau	na (B13)			rs <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V	Auger: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3)		s a H	alt Crust (E quatic Fau ydrogen Si	na (B13) ulfide Odo	r (C1)		rs <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyo Primary Indic Surfac High Satura Water	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)		S. A D	alt Crust (E quatic Fau ydrogen Si ry-Season	na (B13) ulfide Odo Water Tal	r (C1) ble (C2)		rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin	Auger: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2)		S H D	alt Crust (E quatic Fau ydrogen Si ry-Season xidized Rhiz	na (B13) ulfide Odo Water Tal ospheres or	r (C1)		rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
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Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift E Algal Iron D	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	one is requi	S — A — H — D — O (v	alt Crust (Equatic Fau ydrogen Si ry-Season xidized Rhiz where not resence of hin Muck S	na (B13) ulfide Odo Water Tal ospheres or tilled) Reduced Surface (C	r (C1) pole (C2) n Living Roots (C3) Iron (C4)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift E Algal Iron E Inund	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer	one is requi	S — A — H — D — O (v	alt Crust (Equatic Fau ydrogen Si ry-Season xidized Rhiz vhere not resence of	na (B13) ulfide Odo Water Tal ospheres or tilled) Reduced Surface (C	r (C1) pole (C2) n Living Roots (C3) Iron (C4)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift E Algal Iron E Inund	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	one is requi	S — A — H — D — O (v	alt Crust (Equatic Fau ydrogen Si ry-Season xidized Rhiz where not resence of hin Muck S	na (B13) ulfide Odo Water Tal ospheres or tilled) Reduced Surface (C	r (C1) pole (C2) n Living Roots (C3) Iron (C4)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2)
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Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift E Algal Iron E Inund Water	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer r-Stained Leaves (E	one is requi	S — A — H — D — O (v	alt Crust (Equatic Fau ydrogen Si ry-Season xidized Rhiz where not resence of hin Muck S	na (B13) ulfide Odo Water Tal ospheres or tilled) Reduced Surface (Ci	r (C1) pole (C2) n Living Roots (C3) Iron (C4)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Water Sedin Drift E Algal Iron E Inund Water Field Observ	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer r-Stained Leaves (E vations: er Present?	one is requi	S. — A. — H. — D. — (v. — P. — TI — O. — O	alt Crust (Equatic Fau ydrogen Si ry-Season xidized Rhizi vhere not resence of hin Muck S ther (Expla	na (B13) ulfide Odo Water Tal ospheres or tilled) Reduced Surface (Cal ain in Rem	r (C1) ple (C2) n Living Roots (C3) Iron (C4) 7) arks)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determination	n Data Forr	n - Great P	lains Regi	on	
Project/Site: I-25/I-80 Interchange		City/County: Ch	eyenne/Laram	nie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation			State: WY	Sampling Point:	S-17
Investigator(s): R. Newton, D. Soucy				Section,	Township, Range: S'	12 T13N R67W
Landform (hillslope, terrace, etc.): depres	ssion	Local Relief (c	oncave, conve	x, none):	minor concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Pla	ains	Lat. 223	467.9961	Long:	744181.9343	Datum: WY E
Soil Map Unit Name: Urban land-Merden co	omplex, 0 to 3 percent	slopes		N	WI Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for this time of	year? Ye	s X	No (If	no, explain in Remark	ks)
Are Vegetation , Soil , or Hy	drology signific	cantly disturbed?	Are "Normal Ci	rcumstances'	present? Yes	X No
Are Vegetation , Soil , or Hy		lly problematic?	(If needed exi	olain any answers in R	Remarks)
SUMMARY OF FINDINGS - Attach site map						
Hydrophytic Vegetation Present? Yes		Joint Todationo,		ortuni routui		
Hydric Soil Present? Yes	No X	Is the S	ampled Area w	ithin a Wotlan	ıd? Yes	No. Y
· —		is the S	ampieu Area w	illilli a vvellali	iu! Tes	No_X_
Wetland Hydrology Present? Yes	X No					
Remarks:						
Depressional area with dominant hydrophytic	vegetation and wetlar	nd hydrology but I	acking hydric s	oils.		
VEGETATION - Use scientific names of pla	ınts.					
Tree Stratum (Plot size: 30x30 ft)	Absolute Domina % Cover Specie			Test Worksh Dominant Spec		
1 Plot Size. Sux30 it	% Cover Specie	ss! Status		L, FACW, or		1 (4)
1			(excluding F			1 (A)
3.						
3				er of Dominan oss All Strata:		1 (B)
5.			Species Acid	USS All Strata.	·	1 (B)
5	0 = Total C					
Coulings/Chart b Chart are / Diet eine		ovei		ominant Spec		4000/ (4/5)
Sapling/Shrub Stratum (Plot size: 15x	15 ft)		I nat Are OB	L, FACW, or		100% (A/B)
1						
2				Index Works		N.A Itim I In
3				al % Cover o		Multiply by:
4			•	cies	0 x 1	
5			FACW spe		75 x 2	
Llorb Stratum /Diet eizer 55 ft	0 = Total C	over		cies	0 x 3	
Herb Stratum (Plot size: 5x5 ft)	75 \	E4 014/	-	cies	8 x 4	
1. Juncus balticus	75 Y	FACW	•	cies	5 x 5	
2. Euphorbia esula	5 N	NI	Column Tota		88 (A)	
3. Cirsium arvense	8 N	FACU			ence Index = B/A =	2.4
4				Vegetation		
5				_	st for Hydrophytic Veg	etation
6				_	ce Test is >50%.	
7			<u> </u>		ce Index is <u><</u> 3.0¹ gical Adaptations¹ (Pro	
8					in Remarks or on a s	•
9.				_		
0				Problematic	Hydrophytic Vegetation	on (Explain)
	88 = Total C	over				
Woody Vine Stratum (Plot size: 30x30	<u>ft</u>)					
1.					ic soil and wetland hydro	ology must be
2			pres	sent, unless dis	turbed or problematic.	
<u> </u>		l Cover				
% Bare Ground in Herb Stratum 1	2 %		Hyd	rophytic Veget	tation Present?	X Yes No
Remarks:		<u> </u>				
Species with no indicator (NI) are treated as I	JPL for this analysis.					

Profile Descr	iption. (Describe to							
Depth	Matrix			Redox Fe	atures			
(inches)	Color (moist)	% C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10 YR 3/2	100					Sandy Clay	
12-18								road fill
¹ Type: C=Cor	ncentration, D=Deple	etion, RM=Re	educed Matrix, 0	CS=Covere	ed or Coat	ed Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil In	ndicators						Indicato	ors for Problematic Hydric Soils ³ :
Histose	ol (A1)			Sandy	Gleyed M	atrix (S4)		L cm Muck (A9) (LRR I, J)
Histic I	Epipedon (A2)				Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)			 Strippe	d Matrix (S6)	 _	Dark Surface (S7) (LRR G)
Hydrod	gen Sulfide (A4)			_ ``	,	neral (F1)		High Plains Depressions (F16)
	ed Layers (A5) (LRR	RF)			Gleyed M			(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, G	:		_	ed Matrix (F	Reduced Vertic (F18)
	ted Below Dark Surfa				Dark Surf	•		Red Parent Material (TF2)
	Dark Surface (A12)	,		_		urface (F7)		Other (Explain in Remarks)
	Mucky Mineral (S1)			_	Depression		3Indicat	ors of hydrophylic vegetation and
	n Mucky Peat or Peat		 G, H)			essions (F16)		hydrology must be present, unless
2.5 011	I WIGORY I CUL OI I CU					, ,		
	Mucky Peat or Peat(_	(MLR	A 72 & 73 (of LRR H)	disturbe	ed or problematic.
5 cm N	Mucky Peat or Peat (_	(MLR	A 72 & 73 (of LRR H)	disturbe	ed or problematic.
5 cm N	-			(MLR	A 72 & 73 (of LRR H)	disturbe	ed or problematic.
5 cm N Restrictive La	Mucky Peat or Peat (ayer: (if observed)			(MLR	A 72 & 73 (of LRR H)		
5 cm N	Mucky Peat or Peat (ayer: (if observed)			(MLR	A 72 & 73 (of LRR H)		il Present? Yes No _X
5 cm N Restrictive La	Mucky Peat or Peat (ayer: (if observed)			(MLR	A 72 & 73 o	of LRR H)		
5 cm N Restrictive La Type: Depth (inch	Mucky Peat or Peat (ayer: (if observed)			(MLR	A 72 & 73 o	of LRR H)		
5 cm N Restrictive La Type: Depth (inch	Mucky Peat or Peat (ayer: (if observed) nes):			(MLR	A 72 & 73 o	of LRR H)		
5 cm N Restrictive La Type: Depth (inch Remarks:	Mucky Peat or Peat (ayer: (if observed) nes):			(MLR	A 72 & 73 (of LRR H)		
5 cm N Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi	Mucky Peat or Peat (ayer: (if observed) nes):	S3) (LRR F)	: check all that a		A 72 & 73 o		Hydric So	
5 cm N Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica	Mucky Peat or Peat (ayer: (if observed) pes): rology Indicators:	S3) (LRR F)					Hydric So	il Present? Yes No X
5 cm N Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surfac	Mucky Peat or Peat (ayer: (if observed) nes): rology Indicators: ators (minimum of on	S3) (LRR F)	S	apply)	311)		Hydric So	il Present? Yes No X
5 cm N Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydr Primary Indica Surfac High W	Mucky Peat or Peat (ayer: (if observed) nes): rology Indicators: ators (minimum of one water (A1)	S3) (LRR F)	Sa	apply)	311) na (B13)	s	Hydric So	il Present? Yes No X rs (minimum of two required) Surface Soil Cracks (B6)
5 cm N Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surfac High W Satura	Aucky Peat or Peat (ayer: (if observed) ayer: (i	S3) (LRR F)	SaAoHy	apply) alt Crust (E quatic Fau	311) na (B13) ulfide Odo	s r (C1)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
5 cm N Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surfac High W Satura Water	Mucky Peat or Peat (ayer: (if observed) es): rology Indicators: ators (minimum of one we Water (A1) Vater Table (A2) tition (A3)	S3) (LRR F)	Sa Ad Dr	apply) alt Crust (E quatic Fau ydrogen Si y-Season	311) na (B13) ulfide Odo Water Ta	s r (C1)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
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5 cm M Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surfac High W Satura Water Sedim Drift D: Algal M	Aucky Peat or Peat (ayer: (if observed) ayer: (if	S3) (LRR F)	Sa Ad Dr O> (w Pr	apply) alt Crust (Equatic Fau ydrogen So y-Season kidized Rhize there not	311) na (B13) ulfide Odo Water Ta ospheres o tilled) Reduced	r (C1) ble (C2) n Living Roots (C3) Iron (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
5 cm N Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydr Primary Indica Surfac High W Satura Water Sedim Drift De Algal N	Aucky Peat or Peat (ayer: (if observed) ayer: (if	S3) (LRR F)	Sa	apply) alt Crust (Equatic Fau ydrogen So y-Season kidized Rhiz yhere not resence of	311) na (B13) ulfide Odo Water Ta ospheres of tilled) Reduced Surface (C	r (C1) ble (C2) n Living Roots (C3) Iron (C4)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
5 cm N Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydr Primary Indica Surfac High W Satura Water Sedim Drift Do Algal N Iron De	Aucky Peat or Peat (ayer: (if observed) ayer: (if	S3) (LRR F) The is required at Imagery (B)	Sa	apply) alt Crust (Equatic Fau ydrogen So y-Season kidized Rhize there not	311) na (B13) ulfide Odo Water Ta ospheres of tilled) Reduced Surface (C	r (C1) ble (C2) n Living Roots (C3) Iron (C4)	econdary Indicato	il Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
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5 cm M Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surfac High W Satura Water Sedim Drift D Algal M Iron Do Inunda Water- Field Observa	Aducky Peat or Peat (ayer: (if observed) ayer: (i	S3) (LRR F) The is required at Imagery (B)	Sa Ad Dr O> Tr Tr Or	apply) alt Crust (Equatic Fau drogen So y-Season didized Rhize there not resence of ain Muck So ther (Expla	311) na (B13) ulfide Odo Water Ta ospheres of tilled) Reduced Surface (C	r (C1) ble (C2) n Living Roots (C3) Iron (C4) 7) arks)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
5 cm M Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surfac High W Satura Water Sedim Drift Do Algal M Iron Do Inunda Water- Field Observa Surface Water	Aucky Peat or Peat (ayer: (if observed) res): rology Indicators: ators (minimum of one Water (A1) Vater Table (A2) Aution (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aerial -Stained Leaves (B9) ations: r Present?	S3) (LRR F) The is required at Imagery (B)	Sa	apply) alt Crust (Equatic Fau ydrogen So ry-Season kidized Rhize where not resence of hin Muck S ther (Expla	311) na (B13) ulfide Odo Water Ta ospheres of tilled) Reduced Surface (C ain in Rem	s (C1) ble (C2) n Living Roots (C3) Iron (C4) 7) arks)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
5 cm N Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surfac High W Satura Water Sedim Drift Dellar Inunda Water- Field Observa Surface Water Water Table F	Aucky Peat or Peat (ayer: (if observed) res): rology Indicators: ators (minimum of one Water (A1) Vater Table (A2) Aution (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aerial -Stained Leaves (B9) ations: r Present?	s3) (LRR F)	Sa Ad Dr O> Tr Tr Or	apply) alt Crust (Equatic Fau ydrogen Si ry-Season idized Rhize where not resence of hin Muck S ther (Expla	311) na (B13) ulfide Odo Water Ta ospheres of tilled) Reduced Surface (C ain in Rem	r (C1) ble (C2) n Living Roots (C3) Iron (C4) 7) arks)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland I	Determina	ition Da	ata Form	ı - Gre	at Plains Reg	jion		
Project/Site: I-25/I-80 Interchange		City	County: Che	yenne/L	aramie	Sampling Da	ate: 8/1 /	/2019
Applicant/Owner: Wyoming Dept. of Tra	nsportation				State: WY	Sampling Po	oint: S	-18
Investigator(s): R. Newton, D. Soucy					Section	n, Township, Range	: S12 T13N F	₹67W
Landform (hillslope, terrace, etc.): depres	sion	Lo	cal Relief (co	ncave, c	onvex, none):	concave	Slope (%	6): <u>0-2</u>
Subregion (LRR): G - Western Great Plai	ins	Lat.	2240	02.021	Long:	744598.4009	Datum:	: WY E
Soil Map Unit Name: <u>Urban land-Merden co</u>	mplex, 0 to 3 pe	rcent slope	s		1	NWI Classification:	UF	_{ال}
Are climatic/hydrologic conditions on the site t	ypical for this tin	ne of year?	Yes	X	No (If no, explain in Rer	narks)	
Are Vegetation , Soil , or Hyd	drology si	ignificantly	disturbed? A	re "Norm	al Circumstance	s" present? Yes	Х	No
Are Vegetation , Soil , or Hyd	drology n	aturally pro	blematic?		(If needed, e	xplain any answers	in Remarks.)	
SUMMARY OF FINDINGS - Attach site map				ansects.	important featu	ıres. etc.	•	
	X No		,		•	·		
<u> </u>	X No		Is the Sa	mpled Ar	ea within a Wetla	and?	Yes X No)
<u> </u>	X No				Ju u		<u> </u>	
wedana riyarology r resent:								
Remarks:								
Depressional palustrine emergent wetland PE	M-6 in on/off-ran	mp islands	connected vi	a culvert.				
VEGETATION - Use scientific names of plan	nts.			1				
Tree Stratum (Plot size: 30x30 ft)		Dominant	Indicator Status		ince Test Works of Dominant Sp			
Tree Stratum (Plot size: 30x30 ft)	% Cover	Species?	Status		or Dominant Sp e OBL, FACW, o		2	(4)
2					ing FAC-) :	117.0.		(A)
3.				T - 4 - 1 N I		4		
4.					umber of Domina Across All Strat		2	(B)
5.				Ороско	7,10,000,7111,01141	u.		
Sapling/Shrub Stratum (Plot size: 15x1		otal Cover			of Dominant Spe OBL, FACW, o		100%	(A/B)
2.				Prevale	nce Index Work	sheet:		
3					Total % Cover	of:	Multiply	y by:
4				OBL	species	40	x 1 =	40
5				FACW	species			30
	0 = To	otal Cover		FAC	species			0
Herb Stratum (Plot size: 5x5 ft)				FACU	species		_	8
1. Schoenoplectus pungens	40	Y	OBL	UPL	species			0
2. Juncus balticus	15	Y	FACW	Column		57	_`	78 (B)
3. Cirsium arvense		<u>N</u>	FACU			alence Index = B/A =	= 1.4	
4				Hyarop	hytic Vegetation		\/	
5						est for Hydrophytic nce Test is >50%.	vegetation	
6.						nce Index is <3.01		
8.						logical Adaptations ¹	(Provide sup-	_
9.						ta in Remarks or on		
10.					Problemat	ic Hydrophytic Vege	etation (Explai	n)
	57 = To	otal Cover				io riyaropiiyao voge	ration (Explain	,
Woody Vine Stratum (Plot size: 30x30 f								
1.	 /				¹ Indicators of byo	dric soil and wetland h	wdrology must	ho
2.						isturbed or problemat		De
	0 =	Total Cove	er		, 111111, 1111000 0			
% Bare Ground in Herb Stratum 43					Hydrophytic Veg	etation Present?	X Yes	No
Remarks:				<u>I</u>				

SOIL

Sampling Point:

S-18

(inches)	Matrix			Redo	x Feature	S		
(inches)	Color (moist)	%	Color (moist)	%	Тур	e ¹ Loc ²	Texture	Remarks
0-1.5	10 YR 3/2	100					muck	
1.5-4	10 YR 3/2	100					Sandy Clay Loan	
4-12	10 YR 5/2	100		, ,			Sand	some road fill
12								shovel refusal
	·							
¹ Type: C=C	Concentration, D=Deple	etion, RM=R	Reduced Matrix	c, CS=C	overed or	Coated Sand Grains	s. ² Location: PL=	Pore Lining, M=Matrix
Hydric Soil	Indicators						Indicate	ors for Problematic Hydric Soils ³ :
Histo	osol (A1)			Sa	andy Gleye	ed Matrix (S4)	:	1 cm Muck (A9) (LRR I, J)
Histic	c Epipedon (A2)			— Sa	andy Redo	ox (S5)		Coast Prairie Redox (A16) (LRR F, G, H)
	k Histic (A3)				ripped Ma			Dark Surface (S7) (LRR G)
Hydr	rogen Sulfide (A4)			Lc	amy Mucl	ky Mineral (F1)		High Plains Depressions (F16)
	tified Layers (A5) (LRF	RF)			-	ed Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	n Muck (A9) (LRR F, G				epleted Ma		ı	Reduced Vertic (F18)
Depl	leted Below Dark Surfa	ace (A11)				Surface (F6)		Red Parent Material (TF2)
	k Dark Surface (A12)	, ,		De	epleted Da	ark Surface (F7)		Other (Explain in Remarks)
Sand	dy Mucky Mineral (S1)			— Re	edox Depr	essions (F8)	3Indicat	ors of hydrophylic vegetation and
2.5 c	cm Mucky Peat or Pea	t (S2) (LRR	G, H)	—— Ні	gh Plains	Depressions (F16)		d hydrology must be present, unless
5 cm	n Mucky Peat or Peat ((S3) (LRR F)		(MLRA 72 8	& 73 of LRR H)	disturb	ed or problematic.
Dantulation	I account (if a base most)		•					
	Layer: (if observed)							
Type:							Harlin O.	N. Paragraph V. V.
							Hydric So	il Present? Yes X No
Type: Depth <i>(ind</i>							Hydric So	il Present? Yes X No
Type: Depth <i>(ind</i>							Hydric So	il Present? Yes X No
Type: Depth <i>(inc</i> Remarks:	ches):						Hydric So	il Present? Yes X No
Type: Depth (inc Remarks: HYDROLOG	ches):						Hydric So	il Present? Yes X No
Type: Depth (ind Remarks: HYDROLOG Wetland Hy	ches):	ne is require	d; check all th	at apply,)			oil Present? Yes X No
Type: Depth (inc Remarks: HYDROLOG Wetland Hy Primary India	ches): GY rdrology Indicators:	ne is require	d; check all th) ust (B11)			
Type: Depth (inc Remarks: HYDROLOG Wetland Hy Primary India X Surfa	GY vdrology Indicators: icators (minimum of or	ne is require	d; check all th	Salt Cr		13)		ors (minimum of two required)
Type: Depth (ind Remarks: HYDROLOG Wetland Hy Primary India X Surfa X High	GY rdrology Indicators: icators (minimum of or	ne is require	d; check all th	Salt Cri Aquatio	ust (B11) : Fauna (B	13) Odor (C1)		ors <i>(minimum of two required)</i> Surface Soil Cracks (B6)
Type: Depth (inc Remarks: HYDROLOG Wetland Hy Primary Indic X Surfa X High X Satu	ches): drology Indicators: icators (minimum of orace Water (A1) i Water Table (A2)	ne is require	d; check all th	Salt Cru Aquation Hydrog	ust (B11) : Fauna (B en Sulfide	,		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Type: Depth (inc Remarks: HYDROLOG Wetland Hy Primary India X Surfa X High X Satu Wate	ches): drology Indicators: icators (minimum of or ace Water (A1) Water Table (A2) iration (A3)	ne is require	d; check all th	Salt Cru Aquation Hydrog Dry-Sea	ust (B11) : Fauna (B en Sulfide ason Wate	Odor (C1)	Secondary Indicato	ors <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Type: Depth (ind Remarks: HYDROLOG Wetland Hy Primary India X Surfa X High X Satu Wate Sedii	rdrology Indicators: icators (minimum of or ace Water (A1) i Water Table (A2) iration (A3) er Marks (B1)	ne is require	d; check all th	Salt Cru Aquatio Hydrog Dry-Sea Oxidized	ust (B11) : Fauna (B en Sulfide ason Wate	Odor (C1) er Table (C2) eres on Living Roots (C	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Type: Depth (inc Remarks: HYDROLOG Wetland Hy Primary India X Surfa X High X Satu Wate Sedii Drift	rdrology Indicators: icators (minimum of orace Water (A1) in Water Table (A2) irration (A3) er Marks (B1) iment Deposits (B2)	ne is require	d; check all th	Salt Cru Aquatic Hydrog Dry-Sea Oxidized (where	ust (B11) Fauna (B en Sulfide ason Wate Rhizosphe not tilled	Odor (C1) er Table (C2) res on Living Roots (C	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Type: Depth (ind Remarks: HYDROLOG Wetland Hy Primary India X Surfa X High X Satu Wate Sedii Drift Algal	ches): Ordrology Indicators: icators (minimum of or ace Water (A1) i Water Table (A2) iration (A3) er Marks (B1) iment Deposits (B2) Deposits (B3)	ne is require	d; check all th	Salt Cru Aquatio Hydrog Dry-Sea Oxidized (where Presen	ust (B11) Fauna (B en Sulfide ason Wate Rhizosphe not tilled	Odor (C1) er Table (C2) res on Living Roots (C) uced Iron (C4)	Secondary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Type: Depth (ind Remarks: HYDROLOG Wetland Hy Primary India X Surfa X High X Satu Wate Sedii Drift Algal	rdrology Indicators: icators (minimum of orace Water (A1) in Water Table (A2) irration (A3) er Marks (B1) iment Deposits (B2) Deposits (B3) il Mat or Crust (B4)			Salt Cri Aquatic Hydrog Dry-Sea Oxidized (where Presen Thin Mo	ust (B11) Fauna (B en Sulfide ason Wate Rhizosphe not tilled ce of Redu uck Surface	Odor (C1) er Table (C2) res on Living Roots (C) uced Iron (C4)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8)
Type: Depth (ind Remarks: HYDROLOG Wetland Hy Primary India X Surfa X High X Satu Wate Sedii Drift Algal Iron Inunc	rdrology Indicators: icators (minimum of orace Water (A1) in Water Table (A2) irration (A3) er Marks (B1) iment Deposits (B2) Deposits (B3) il Mat or Crust (B4) Deposits (B5)	al Imagery (E		Salt Cri Aquatic Hydrog Dry-Sea Oxidized (where Presen Thin Mo	ust (B11) Fauna (B en Sulfide ason Wate Rhizosphe not tilled ce of Redu uck Surface	Odor (C1) er Table (C2) eres on Living Roots (C) uced Iron (C4) ee (C7)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Type: Depth (ind Remarks: HYDROLOG Wetland Hy Primary India X Surfa X High X Satu Wate Sedia Drift Algal Iron Inunc	rdrology Indicators: icators (minimum of or ace Water (A1) if Water Table (A2) irration (A3) er Marks (B1) iment Deposits (B2) Deposits (B3) il Mat or Crust (B4) Deposits (B5) dation Visible on Aeria er-Stained Leaves (B9	al Imagery (E		Salt Cri Aquatic Hydrog Dry-Sea Oxidized (where Presen Thin Mo	ust (B11) Fauna (B en Sulfide ason Wate Rhizosphe not tilled ce of Redu uck Surface	Odor (C1) er Table (C2) eres on Living Roots (C) uced Iron (C4) ee (C7)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type: Depth (ind Remarks: HYDROLOG Wetland Hy Primary India X Surfa X High X Satu Wate Sedii Drift Algal Iron I Inund Wate	rdrology Indicators: icators (minimum of or ace Water (A1) if Water Table (A2) irration (A3) er Marks (B1) iment Deposits (B2) Deposits (B3) il Mat or Crust (B4) Deposits (B5) dation Visible on Aeria er-Stained Leaves (B9	al Imagery (E		Salt Cri Aquatic Hydrog Dry-Sea Oxidized (where Presen Thin Mi Other (i	ust (B11) Fauna (B en Sulfide ason Wate Rhizosphe not tilled ce of Redu uck Surface	Odor (C1) er Table (C2) eres on Living Roots (C) uced Iron (C4) ee (C7)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Type: Depth (ind Remarks: HYDROLOG Wetland Hy Primary India X Surfa X High X Satu Wate Sedii Drift Algal Iron Inunc Wate Field Obser Surface Wate	rdrology Indicators: icators (minimum of orace Water (A1) in Water Table (A2) irration (A3) irration (A3) irration (B1) irration (B2) Deposits (B3) il Mat or Crust (B4) Deposits (B5) dation Visible on Aeria irrations: ter Present?	al Imagery (E	37) Yes	Salt Cri Aquation Hydrog Dry-Sei Oxidized (where Presen Thin Mi Other (i	ust (B11) Fauna (B Fa	Odor (C1) er Table (C2) eres on Living Roots (C) uced Iron (C4) ee (C7) Remarks) Depth (inches)	Secondary Indicato	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C6) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Type: Depth (ind Remarks: HYDROLOG Wetland Hy Primary India X Surfa X High X Satu Wate Sedia Drift Algal Iron I Inund Wate Field Obser Surface Wate Water Table	rdrology Indicators: icators (minimum of orace Water (A1) in Water Table (A2) irration (A3) irration (A3) irration (B1) irration (B2) Deposits (B3) il Mat or Crust (B4) Deposits (B5) dation Visible on Aeria irrations: ter Present?	al Imagery (E	Yes Yes	Salt Cri Aquatic Hydrog Dry-Sea Oxidized (where Presen Thin Mi Other (i	ust (B11) Fauna (B en Sulfide ason Wate Rhizosphe not tilled ce of Redu uck Surfac Explain in	Odor (C1) er Table (C2) eres on Living Roots (C) uced Iron (C4) ee (C7) Remarks)	Secondary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C6) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology Present?

US Army Corps of Engineers

Lo Lat percent slope time of year? significantly naturally pro	22 yes Ye disturbed? oblematic?	soncave, con 4234.55 s X Are "Norma	State: WY Section nvex, none): Long: No (Il Circumstances	n, Township, Range: Some 745187.4398 WWI Classification: If no, explain in Remarks present? Yes explain any answers in F	Slope (%): Datum: WY E UPL (s) X No
Lat percent slope time of year? significantly naturally pro	22 yes Ye disturbed? oblematic?	s X Are "Norma	Section nvex, none): Long: No (Il Circumstances (If needed, ex	n, Township, Range: Some 745187.4398 WWI Classification: If no, explain in Remarks present? Yes explain any answers in F	12 T13N R67W Slope (%): Datum: WY E UPL (S) X No
Lat percent slope time of year? significantly naturally pro	22 yes Ye disturbed? oblematic?	s X Are "Norma	No (If needed, ex	none 745187.4398 JWI Classification: If no, explain in Remark " present? Yes kplain any answers in R	Slope (%): Datum: WY E UPL (s) X No
Lat percent slope time of year? significantly naturally pro	22 yes Ye disturbed? oblematic?	s X Are "Norma	No (Circumstances (If needed, ex	745187.4398 WI Classification: If no, explain in Remark " present? Yes kplain any answers in F	Datum: WY E UPL (s) X No
percent slope time of year? significantly naturally pro	es Ye disturbed? oblematic? locations,	s X Are "Norma transects, i	No (Il Circumstances (If needed, ex	IWI Classification: If no, explain in Remark " present? Yes xplain any answers in F	UPL (s) X No
time of year? significantly naturally pro	Ye disturbed? bblematic? locations,	Are "Norma	No(Il Circumstances (If needed, e)	off no, explain in Remari "present? Yes "xplain any answers in F	(s) XNo
significantly naturally pro	disturbed? bblematic? locations,	Are "Norma	Il Circumstances	s" present? Yes xplain any answers in F	XNo
naturally pro	oblematic?	transects, i	(If needed, ex	cplain any answers in F	
-	locations,		•		temarks.)
npiing point - -			mportant reatu	res, etc.	
- - -	Is the S	ampled Are			
- -	Is the S	amplad Ara			
_		ampied Are	a within a Wetla	ind? Yes	No_X
Dominant	Indicator				
Species?	Status				
				r FAC:	0 (A)
		(excludin	g / AC-) .		
					4 (-)
		Species	Across All Strata	a:	1 (B)
Total Cover					
Total Cover					0% (A/B)
		That Are	OBE, FACVV, O		0% (A/B)
		Prevaler	nce Index Work	sheet:	
					Multiply by:
			•	15 x 2	= 30
Total Cover		FAC	species	0 x 3	= 0
		FACU :	species	10 x 4	= 40
N	NI	UPL :	species	52 x 5	= 260
N	FACU	Column	Totals:	85 (A) 338 (B)
N	FACW		Preva	lence Index = B/A =	4.0
N	OBL	Hydroph	ytic Vegetation	Indicators:	
<u> </u>	NI	_			etation
		_			
		-		_	
		-	•		•
					,
Total Cover		-	Problemati	c Hydropnytic Vegetati	on (Expiain)
Total Cover					
			1		
					ology must be
= Total Cov			present, unless di	sturbed of problematic.	
, Jiai COV	- .		Hydrophytic Veg	etation Present?	Yes X No
		'	, aropriyae vegi	ctation i resent:	
	Total Cover N N N Y Total Cover	Species? Status Total Cover N NI N FACU N FACW N OBL Y NI Total Cover Total Cover	Species? Status Number of That Are (excluding Species). Total Cover Percent of That Are Prevaler OBL FACW FAC FACU UPL Column N FACW N OBL Y NI Total Cover Total Cover FACW Total Cover FACW Sharp Species of Total Cover FACW Total Cover FACW Sharp Species of Total Cover FACW Sharp Species of Total Cover Total Cover FACW Sharp Species of Total Cover FACW Sharp Sharp Species of Total Cover FACW Sharp Sh	Species? Status Number of Dominant Species Across All Strate Total Cover Percent of Dominant Species Across All Strate Prevalence Index Work Total % Cover OBL species FACU species FACU species Column Totals: Prevalet Prevalet 4. Morpholomoporting dat Problemati Total Cover Problemati 1 Indicators of hydrophytic Veget Hydrophytic Veget Hydrophytic Veget Prophytic Veget Pro	Number of Dominant Species That Are OBL, FACW, or FAC: (excluding FAC-): Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index Worksheet: Total % Cover of: OBL species 8 x 1 FACW species 15 x 2 FAC species 0 x 3 FACU species 10 x 4 UPL species 52 x 5 Column Totals: 85 (A Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1. Rapid Test for Hydrophytic Veg 2. Dominance Test is >50%. 3. Prevalence Index is <3.0' 4. Morphological Adaptations¹ (Preporting data in Remarks or on a seen to present, unless disturbed or problematic. Total Cover Hydrophytic Vegetation Present?

SOIL

Depth	Matrix			Redox	Features			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10 YR 3/2	100					Clay	
2-6	10 YR 4/2	100					Sand	
6+								road fill
¹ Type: C=Co	oncentration, D=Dep	letion. RM	I=Reduced Mati	ix. CS=Cov	ered or Coat	ted Sand Grains.	² Location: P	L=Pore Lining, M=Matrix
Hydric Soil	<u> </u>			,				ators for Problematic Hydric Soils ³ :
•	sol (A1)			San	dy Gleyed Ma	atrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)				dy Redox (St			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)				ped Matrix (•		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)				my Mucky Mi	,		High Plains Depressions (F16)
	fied Layers (A5) (LR	R F)			my Gleyed M			(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, (leted Matrix (Reduced Vertic (F18)
	eted Below Dark Surf		1		ox Dark Surf			Red Parent Material (TF2)
	Dark Surface (A12)	ace (ATT)		leted Dark Sun	` ,		Other (Explain in Remarks)
	y Mucky Mineral (S1	`			ox Depression	, ,	3	-
	m Mucky Peat or Pea		RRG H)		•	ressions (F16)		cators of hydrophylic vegetation and and hydrology must be present, unless
	in macky i car of i co	at (OL) (L	· · · · · · · · · · · · · · · · · · ·		i i idiilo Depi			rbed or problematic.
	Mucky Peat or Peat	(S3) (LRI	R F)	(M	ILRA 72 & 73 d	of LRR H)	uistu	ibed of problematic.
5 cm	Mucky Peat or Peat	(S3) (LRI	R F)	(M	ILRA 72 & 73 o	of LRR H)	distu	ibed of problematic.
5 cm	Mucky Peat or Peat Layer: (if observed)	(S3) (LRI	R F) 	(M	ILRA 72 & 73 (of LRR H)	uistu	bed of problematic.
5 cm Restrictive I Type:	Layer: (if observed)	(S3) (LR I	R F) 	(M	ILRA 72 & 73 (of LRR H)		
5 cm	Layer: (if observed)	(S3) (LRI	R F)	(M	ILRA 72 & 73 c	of LRR H)		Soil Present? Yes No _X
5 cm Restrictive I Type:	Layer: (if observed)	(S3) (LRI	R F)	(M	ILRA 72 & 73 c	of LRR H)		
5 cm Restrictive I Type: Depth (inc	Layer: (if observed)	(S3) (LRI	R F)	(M	ILRA 72 & 73 c	of LRR H)		
5 cm Restrictive I Type: Depth (inc	Layer: (if observed)	(S3) (LRI	R F)	(M	ILRA 72 & 73 c	of LRR H)		
5 cm Restrictive I Type: Depth (inc) Remarks:	Layer: (if observed)	(S3) (LRI	R F)	(M	ILRA 72 & 73 c	of LRR H)		
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd	Layer: (if observed)				ILRA 72 & 73 c		Hydric \$	
Type: Depth (incomplete Primary Indicate)	Layer: (if observed) thes): TY drology Indicators:						Hydric \$	Soil Present? Yes No X
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa	Layer: (if observed) shes): Y drology Indicators: cators (minimum of o			hat apply) _Salt Crus			Hydric \$	Soil Present? Yes No X
Femarks: HYDROLOG Wetland Hyd Surfa High	Layer: (if observed) Shes): GY drology Indicators: cators (minimum of o			hat apply) Salt Crus Aquatic F	t (B11)	s	Hydric \$	Soil Present? Yes No X Ators (minimum of two required) Surface Soil Cracks (B6)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Layer: (if observed) thes): drology Indicators: cators (minimum of o			hat apply) Salt Crusi Aquatic F Hydrogen	t (B11) auna (B13)	S or (C1)	Hydric \$	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High Satur Wate	ches): drology Indicators: cators (minimum of once Water (A1) Water Table (A2) ration (A3)			hat apply) Salt Crusi Aquatic F Hydrogen Dry-Seas	t (B11) fauna (B13) n Sulfide Odo on Water Tal	S or (C1)	Hydric \$	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	Adver: (if observed) Shes): Grading Indicators: Eators (minimum of orace Water (A1) Water Table (A2) Fation (A3) For Marks (B1)			hat apply) Salt Crusi Aquatic F Hydrogen Dry-Seas	t (B11) fauna (B13) n Sulfide Odo on Water Tal	or (C1) ble (C2)	Hydric \$	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I	ches): drology Indicators: cators (minimum of of office Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2)			hat apply) Salt Crusi Aquatic F Hydrogen Dry-Seas Oxidized R (where ne	t (B11) fauna (B13) n Sulfide Odo on Water Tal	or (C1) ble (C2) n Living Roots (C3)	Hydric \$	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	Layer: (if observed) Shes): GY drology Indicators: cators (minimum of			hat apply) Salt Crusi Aquatic F Hydrogen Dry-Seas Oxidized R (where no	t (B11) fauna (B13) n Sulfide Odo on Water Tal	or (C1) ble (C2) n Living Roots (C3)	Hydric \$	stors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron [ches): Cators (minimum of orace Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	ne is requ	uired; check all t	hat apply) Salt Crust Aquatic F Hydrogen Dry-Seas Oxidized R (where no	t (B11) fauna (B13) n Sulfide Odo on Water Tal hizospheres or ot tilled)	or (C1) ble (C2) n Living Roots (C3) Iron (C4) 7)	Hydric \$	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Ayer: (if observed) Shes): GY drology Indicators: cators (minimum of orace Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	ne is requ	uired; check all t	hat apply) Salt Crust Aquatic F Hydrogen Dry-Seas Oxidized R (where no	t (B11) fauna (B13) n Sulfide Odo on Water Tal chizospheres or ot tilled) e of Reduced k Surface (C	or (C1) ble (C2) n Living Roots (C3) Iron (C4) 7)	Hydric \$	stors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	ches): drology Indicators: cators (minimum of orace Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aerior-Stained Leaves (B5)	ne is requ	uired; check all t	hat apply) Salt Crust Aquatic F Hydrogen Dry-Seas Oxidized R (where no	t (B11) fauna (B13) n Sulfide Odo on Water Tal chizospheres or ot tilled) e of Reduced k Surface (C	or (C1) ble (C2) n Living Roots (C3) Iron (C4) 7)	Hydric \$	stors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	Layer: (if observed) Shes): GY drology Indicators: cators (minimum of or	ne is requ	uired; check all t	hat apply) Salt Crusi Aquatic F Hydrogen Dry-Seas Oxidized R (where notes of the contest of the	t (B11) fauna (B13) n Sulfide Odo on Water Tal hizospheres or ot tilled) e of Reduced k Surface (C'	or (C1) ble (C2) n Living Roots (C3) Iron (C4) 7)	Hydric \$	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	Layer: (if observed) ches): drology Indicators: cators (minimum of orace Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aericar-Stained Leaves (B5) vations: er Present?	ne is requ	y (B7)	hat apply) Salt Crust Aquatic F Hydrogen Dry-Seas Oxidized R (where no	t (B11) fauna (B13) n Sulfide Odo on Water Tal chizospheres or ot tilled) e of Reduced k Surface (C' cplain in Rem	or (C1) ble (C2) n Living Roots (C3) Iron (C4) 7) narks)	Hydric \$	stors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate Field Obser Surface Wate Water Table	Layer: (if observed) ches): drology Indicators: cators (minimum of orace Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aericar-Stained Leaves (B5) vations: er Present?	ne is requ al Imager 9)	y (B7)	hat apply) Salt Crusi Aquatic F Hydrogen Dry-Seas Oxidized R (where no	t (B11) fauna (B13) i Sulfide Odo on Water Tal thizospheres or ot tilled) of Reduced k Surface (C' cplain in Rem	or (C1) ble (C2) n Living Roots (C3) Iron (C4) 7) narks)	Hydric \$	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology

Sampling Point:

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Wetland Detern	nination Data	Form - Great	at Plains Reg	ion	
Project/Site: I-25/I-80 Interchange	City/Cou	nty: Cheyenne/La	aramie	Sampling Date	8/1/2019
Applicant/Owner: Wyoming Dept. of Transportat	ion		State: WY	Sampling Point	:: S-20
Investigator(s): R. Newton, D. Soucy			Section	- ı, Township, Range: S	12 T13N R67W
Landform (hillslope, terrace, etc.): depression	Local F	Relief <i>(concave, co</i>	onvex, none):	minor concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	Lat.	223633.3218	Long:	744811.1202	Datum: WY E
Soil Map Unit Name: Urban land-Merden complex, 0 t	o 3 percent slopes		N	WI Classification:	PEMA/PEMC
Are climatic/hydrologic conditions on the site typical for	this time of year?	Yes X	No (/	f no, explain in Remai	rks)
Are Vegetation , Soil , or Hydrology	significantly dist	urbed? Are "Norm		•	X No
Are Vegetation , Soil , or Hydrology	naturally problen			plain any answers in l	
SUMMARY OF FINDINGS - Attach site map showing					(cmarks.)
	Sampling point loca	itions, transects,	important leatu	165, 616.	
Hydrophytic Vegetation Present? Yes X No	 .		*** *** ***	10	V N
Hydric Soil Present? Yes X No		s the Sampled Ar	ea within a Wetla	nd? Yes	s_X_ No
Wetland Hydrology Present? Yes X No					
Remarks:	DEM 7 in an left rame	o iolond			
NWI-mapped depressional palustrine emergent wetland VEGETATION - Use scientific names of plants.	PEM-7 III ON/OII-ram	p Island.			
Absolute	e Dominant Ind	dicator Domina	nce Test Works	heet:	
Tree Stratum (Plot size: 30x30 ft) % Cove			of Dominant Spe		
1.		That Are	e OBL, FACW, or	FAC:	1 (A)
2.		(excludi	ng FAC-) :	_	
3.		Total Nu	ımber of Dominaı	nt	
4.			Across All Strata		1 (B)
5.				_	
Sapling/Shrub Stratum (Plot size: 15x15 ft) 1.	= Total Cover		of Dominant Spe e OBL, FACW, or		100% (A/B)
2.		Prevale	nce Index Work	sheet:	
3.			Total % Cover	of:	Multiply by:
4.		OBL	species	0 x 1	
5.		FACW	species	95 x 2	2 = 190
0	= Total Cover	FAC	species	0 x 3	3 = 0
Herb Stratum (Plot size: 5x5 ft)	_	FACU	species	0 x 4	1 = 0
1. Distichlis spicata 90	Y F	ACW UPL	species	0 x 5	5 = 0
2. Alopecurus pratensis 5	N F	ACW Column	Totals:	95 (A	A) 190 (B)
3.			Preva	lence Index = B/A =	2.0
4.		Hydrop	hytic Vegetation	Indicators:	
5.			X 1. Rapid Te	est for Hydrophytic Ve	getation
6.			X 2. Dominar	ice Test is >50%.	
7.			X 3. Prevaler	ice Index is <3.01	
8.				ogical Adaptations¹ (P	
9.			porting data	a in Remarks or on a s	separate sheet)
0.			Problemati	c Hydrophytic Vegetat	ion (Explain)
95	= Total Cover				
Woody Vine Stratum (Plot size: 30x30 ft)	_				
1.			¹ Indicators of hvd	ric soil and wetland hydi	rology must be
2.				sturbed or problematic.	01
0	= Total Cover			•	
% Bare Ground in Herb Stratum 5 %			Hydrophytic Vege	tation Present?	X Yes No
Remarks:					

Profile Desc	ription: (Describe t	o the depth	needed to docun	nent the indi	cator or	confirm the absen	ce of indicators.)	
Depth	Matrix			Redox Fea	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10 YR 2/1	100					Sandy Clay	
4-16	10 YR 6/2	96	7.5 YR 5/6	4	С	M	Sand	
¹ Type: C=Co	oncentration, D=Dep	oletion, RM	Reduced Matrix,	CS=Covere	ed or Coa	ated Sand Grains.	² Location: PL=Pe	ore Lining, M=Matrix
Hydric Soil I	·	•	<u> </u>					for Problematic Hydric Soils ³ :
_	sol (A1)			Sandy (Gleved N	Лatrix (S4)		m Muck (A9) (LRR I, J)
	Epipedon (A2)		_	X Sandy I	-			ast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		_		d Matrix	•		rk Surface (S7) (LRR G)
	ogen Sulfide (A4)		_			/lineral (F1)		h Plains Depressions (F16)
	fied Layers (A5) (LF	PR F)	_		-	Matrix (F2)		LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	-	_		ed Matrix			duced Vertic (F18)
	eted Below Dark Sur		_			face (F6)		d Parent Material (TF2)
	Dark Surface (A12)		_			Surface (F7)		ner (Explain in Remarks)
	y Mucky Mineral (S		_			ions (F8)		
	n Mucky Peat or Pe	,	RG H)		•	oressions (F16)		s of hydrophylic vegetation and ydrology must be present, unless
	Mucky Peat or Peat		_			of LRR H)		or problematic.
	mucky real or real	(00) (21111		(IVIZIO	.,,,		1	
Restrictive L	_ayer: (if observed)							
Type:								
Depth (inc	hes):						Hydric Soil	Present? Yes X No
Remarks:							1	
HYDROLOG								
_	drology Indicators:		radiabaak all tha	t ann()		6.	aaandami Indiaatara	(minimum of two required)
-	ators (minimum of o	nie is requi			44)	30	•	
	ce Water (A1)			Salt Crust (B	•			Surface Soil Cracks (B6)
·	Water Table (A2)			Aquatic Faur	• ,			Sparsley Vegetated Concave Surf. (B8)
	ation (A3)			Hydrogen Su				Drainage Patterns (B10) Oxidized Rhizospheres on Living
	r Marks (B1)			Ory-Season		` '		Roots (C3) (where tilled)
	nent Deposits (B2)				•	on Living Roots (C3)		Crayfish Burrows (C8)
	Deposits (B3)		•	where not t	•	d Incom (OA)		, ,
<u> </u>	Mat or Crust (B4)			Presence of		` ,		Saturation Visible on Aerial Imagery (C9)
	Deposits (B5)			Thin Muck S	,	,		Geomorphic Position (D2)
	ation Visible on Aer	0,	(B7)(Other (Expla	ın ın Rer	narks)		FAC-Neutral Test (D5)
Wate	r-Stained Leaves (B	19)						Frost-Heave Hummocks (D7) (LRR F)
Field Observ	vations:							
Surface Wate	er Present?		Yes _	No	X	Depth (inches)		Wetland Hydrology
Water Table	Present?		Yes _	No	Χ	Depth (inches)		Present?
Saturation Pr	resent? (includes ca	pillary fring	e) Yes _	No	Χ	Depth (inches)		X Yes No
Remarks:								

Wetland	Determinati	on Data	Form - Gre	at Plains Reg	ion	
Project/Site: I-25/I-80 Interchange		City/Coun	ty: Cheyenne/L	aramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Tra	ansportation	•		State: WY	Sampling Point:	S-21
Investigator(s): R. Newton, D. Soucy				Section	n, Township, Range: S	12 T13N R67W
Landform <i>(hillslope, terrace, etc.)</i> : minor t	errace	Local Re	elief <i>(concave, c</i>	onvex, none):	minor convex	Slope (%): 0-1
Subregion (LRR): G - Western Great Pla	ins	Lat.	223653.3305	Long:	744789.472	Datum: WY E
Soil Map Unit Name: <u>Urban land-Merden co</u>	mplex, 0 to 3 perce	nt slopes		N	IWI Classification:	UPL
Are climatic/hydrologic conditions on the site t	typical for this time	of year?	Yes X	No(/	lf no, explain in Reman	ks)
Are Vegetation , Soil , or Hy	drology sign	ificantly distur	bed? Are "Norm	al Circumstances	" present? Yes	X No
Are Vegetation , Soil , or Hy	drology natu	rally problema	atic?	(If needed, ex	plain any answers in F	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing samplin	g point locat	ions, transects,	important featu	res, etc.	
Hydrophytic Vegetation Present? Yes	No X			-		
Hydric Soil Present? Yes	No X	ls	the Sampled Ar	ea within a Wetla	nd? Yes	No X
Wetland Hydrology Present? Yes	No X		•			
Remarks:	<u> </u>					
Paired upland point for PEM-7. VEGETATION - Use scientific names of pla	nte					
VEGETATION - Ose scientific names of pla		ninant Indi	cator Domina	ance Test Works	heet:	
<u>Tree Stratum</u> (Plot size: 30x30 ft)			J. 10.	of Dominant Spe		
1.			That Ar	e OBL, FACW, or	FAC:	1 (A)
2.			(excludi	ing FAC-):	_	
3.			Total N	umber of Domina	nt	
4.			Species	Across All Strata	a:	2 (B)
5.					_	
Sapling/Shrub Stratum (Plot size: 15x1	0 = Total	Cover		of Dominant Spe e OBL, FACW, or		50% (A/B)
2			Prevale	ence Index Work	sheet:	
3				Total % Cover	of:	Multiply by:
4			OBL	species	0 x 1	= 0
5			FACW	species	30 x 2	
	= Total	Cover	FAC	species	0 x 3	
Herb Stratum (Plot size: 5x5 ft)			FACU	•	60 x 4	
1. Juncus balticus			CW UPL	species	0 x 5	
2. Distichlis spicata			CW Column		90 (A	
3. Poa pratensis	60	Y FA	.CU		lence Index = B/A =	3.3
4			Пуагор	hytic Vegetation		rotation
5					est for Hydrophytic Veo nce Test is >50%.	jetation
6.					nce Index is <3.01	
8.					ogical Adaptations¹ (Pr	ovide sup-
9.				•	a in Remarks or on a s	•
0.				Problemati	c Hydrophytic Vegetati	on (Explain)
· 	90 = Total	Cover			, , , ,	(1 /
Woody Vine Stratum (Plot size: 30x30	ft)					
1.	·			¹ Indicators of hvd	ric soil and wetland hydr	ology must be
2.					sturbed or problematic.	J,
	0 = To	tal Cover				
% Bare Ground in Herb Stratum	0 %			Hydrophytic Vege	etation Present?	Yes X No
Remarks:						

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	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10 YR 3/2	100					Sandy Clay	50% road fill
6-18	10 YR 5/3	100					Sand	
¹ Type: C=Co	oncentration, D=Dep	letion RM:	=Reduced Matrix	CS=Cove	red or Coa	ted Sand Grains	² Location: PL	=Pore Lining, M=Matrix
Hydric Soil I								tors for Problematic Hydric Soils ³ :
•	sol (A1)			Sand	/ Gleyed M	latrix (S4)	muica	1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		/ Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		-		ed Matrix (•		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)		-		`	lineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LR	PR F)	-		y Mucky M y Gleyed M	, ,	-	(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	•	-		ted Matrix	` ,		Reduced Vertic (F18)
	eted Below Dark Sur		-		k Dark Surf			Red Parent Material (TF2)
	Dark Surface (A12)	, ,	-			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S1		-		k Depressi		<u> </u>	, ,
	n Mucky Peat or Pe		BC H)		•	ressions (F16)		ators of hydrophylic vegetation and and hydrology must be present, unless
2.0 0	ii waaky i cat oi i c	at (02) (Liv						ped or problematic.
5 cm	Mucky Peat or Peat	(S3) (I RR	F)	(MI)	RA 72 & 72			
5 cm	Mucky Peat or Peat	(S3) (LRR	F)	(ML	RA 72 & 73	OT LKK H)	1	·
	Mucky Peat or Peat -ayer: (if observed)	t (S3) (LRR	F)	(ML	RA 72 & 73	OT LRK H)		<u>`</u>
Restrictive L	_ayer: (if observed)	(S3) (LRR	F)	(ML	RA 72 & 73	OT LKK H)		
Restrictive L	_ayer: (if observed)	t (S3) (LRR	F)	(ML	RA 72 & 73	OT LKK H)		oil Present? Yes No _X
Restrictive L	_ayer: (if observed)	t (S3) (LRR	F)	(ML	RA 72 & 73	OT LKK H)		
Restrictive L Type: Depth (inc.	_ayer: (if observed)	: (S3) (LRR	F)	(ML	RA 72 & 73	OT LKK H)		
Restrictive L Type: Depth (inc.) Remarks:	.ayer: (if observed) hes):	: (S3) (LRR	F)	(ML	RA 72 & 73	OT LKK H)		
Restrictive L Type: Depth (inc. Remarks:	hes):		F)	(ML	RA 72 & 73	OT LKK H)		
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd	hes): Y drology Indicators:				RA 72 & 73		Hydric S	oil Present? Yes No X
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of company)		red; check all tha	t apply)			Hydric S	oil Present? Yes No X
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of company) ce Water (A1)		red; check all tha	t apply) Salt Crust ((B11)		Hydric S	oil Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of o		red; check all tha	t <i>apply)</i> Salt Crust (Aquatic Fal	(B11) una (B13)	S	Hydric S	oil Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V	Auger: (if observed) hes): Y drology Indicators: eators (minimum of companion of		red; check all tha	t <i>apply)</i> Salt Crust (Aquatic Far	(B11) una (B13) Sulfide Odd	S or (C1)	Hydric S	oil Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High V Satura Watel	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)		red; check all tha	t apply) Salt Crust (Aquatic Fal Hydrogen S Dry-Season	(B11) una (B13) Sulfide Odd n Water Ta	or (C1)	Hydric S	oil Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin	Auger: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2)		red; check all tha	t apply) Salt Crust (Aquatic Fal Hydrogen S Dry-Seasor Dxidized Rhi	(B11) una (B13) Sulfide Odo n Water Ta zospheres o	S or (C1)	Hydric S	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High V Satura Watel Sedin Drift D	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of of complete (A1)) Water Table (A2) ation (A3) or Marks (B1) ment Deposits (B2) Deposits (B3)		red; check all tha	t apply) Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Dxidized Rhi	(B11) una (B13) Sulfide Odo n Water Ta zospheres o	or (C1) able (C2) on Living Roots (C3)	Hydric S	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyo Primary Indic Surfac High Satur: Water Sedin Drift D Algal	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)		red; check all tha	t apply) Salt Crust (Aquatic Falt Hydrogen S Dry-Seasor Dxidized Rhi (where not	(B11) una (B13) Sulfide Odd n Water Ta zospheres o t tilled) of Reduced	or (C1) sible (C2) on Living Roots (C3)	Hydric S	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift E Algal Iron D	Auger: (if observed)	one is requi	red; check all tha	t apply) Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Dxidized Rhi where not Presence of Thin Muck	(B11) una (B13) Sulfide Odo n Water Ta zospheres o t tilled) of Reduced Surface (C	or (C1) able (C2) on Living Roots (C3)	Hydric S	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift E Algal Iron E Inund	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer	one is requi	red; check all tha	t apply) Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Dxidized Rhi where not Presence of Thin Muck	(B11) una (B13) Sulfide Odd n Water Ta zospheres o t tilled) of Reduced	or (C1) able (C2) on Living Roots (C3)	Hydric S	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift E Algal Iron E Inund	Auger: (if observed)	one is requi	red; check all tha	t apply) Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Dxidized Rhi where not Presence of Thin Muck	(B11) una (B13) Sulfide Odo n Water Ta zospheres o t tilled) of Reduced Surface (C	or (C1) able (C2) on Living Roots (C3)	Hydric S	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Water Sedin Drift E Algal Iron E Inund Water Field Observ	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer r-Stained Leaves (B	one is requi	red; check all tha	t apply) Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Dxidized Rhi where not Presence of Thin Muck	(B11) una (B13) Sulfide Odo n Water Ta zospheres o t tilled) of Reduced Surface (C	or (C1) able (C2) on Living Roots (C3)	Hydric S	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
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Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift E Algal Iron E Inund Water Field Observ Surface Water Water Table	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer r-Stained Leaves (B vations: er Present?	one is requi	red; check all tha	t apply) Salt Crust (Aquatic Far Hydrogen S Dry-Seasor Dxidized Rhi where not Presence c Thin Muck Other (Exp	(B11) una (B13) Sulfide Odd n Water Ta zospheres o t tilled) of Reduced Surface (C lain in Rem o X [or (C1) able (C2) on Living Roots (C3) I Iron (C4) C7) narks)	Hydric S	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Determination	n Data Form	- Great Plains Regi	on	
Project/Site: I-25/I-80 Interchange	City/County: Chey	/enne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Transportation	· · · <u></u>	State: WY	Sampling Point:	S-22
Investigator(s): R. Newton, D. Soucy		Section	, Township, Range: S1 2	2 T13N R67W
Landform (hillslope, terrace, etc.): depression	Local Relief (cor	ncave, convex, none):	concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	Lat. 22390	63.496 Long:	744576.4639	Datum: WY E
Soil Map Unit Name: Poposhia-Trimad complex, 3 to 15 percent	slopes	N'	WI Classification:	UPL
Are climatic/hydrologic conditions on the site typical for this time of	of year? Yes	X No (II	no, explain in Remarks	:)
Are Vegetation , Soil , or Hydrology signif	ficantly disturbed? Ar	e "Normal Circumstances'	present? Yes	X No
Are Vegetation , Soil , or Hydrology natur	ally problematic?	(If needed, ex	olain any answers in Re	marks.)
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, tra	insects, important featur	es, etc.	
Hydrophytic Vegetation Present? Yes X No		•	•	
Hydric Soil Present? Yes No X	Is the San	npled Area within a Wetlar	nd? Yes	No X
Wetland Hydrology Present? Yes X No		•	-	
Remarks:				
		hardan la arriba de la alcia arbarda	de este	
Depressional area at culvert mouth with dominant hydrophytic vec	jetation and wettand	nydrology but lacking nydi	IC SOIIS.	
VEGETATION - Use scientific names of plants.		Daminanaa Taat Wankal		
Absolute Domi <u>Tree Stratum</u> (Plot size: 30x30 ft) % Cover Spec	mant maloator	Dominance Test Worksh Number of Dominant Spe		
1.		That Are OBL, FACW, or		1 (A)
2.		(excluding FAC-):		
3.		Total Number of Dominan	t	
4.		Species Across All Strata		1 (B)
5.				
		Percent of Dominant Spec That Are OBL, FACW, or		100% (A/B)
2		Prevalence Index Works	heet:	
3		Total % Cover	of:	Multiply by:
4		OBL species	0 x 1 =	
5		FACW species	25 x 2 =	
Userb Stratum (Plot size: 5v5 #		FACU species	$\frac{0}{0}$ $\frac{x}{4}$ $\frac{3}{4}$	
Herb Stratum (Plot size: 5x5 ft) 1. Juncus balticus 25		FACU species UPL species	$\frac{0}{0}$ x 4 = 0 x 5 =	0
2.	PACW	Column Totals:	25 (A)	
3.			ence Index = B/A =	50 (B) 2.0
4.		Hydrophytic Vegetation		2.0
5.			st for Hydrophytic Vege	tation
6.			ce Test is >50%.	
7.		X 3. Prevalen	ce Index is <3.01	
8. 9.		·	gical Adaptations¹ (Prov in Remarks or on a sep	•
10.		Problemation	: Hydrophytic Vegetatior	ı (Explain)
25 = Total	Cover		, , , ,	` ' /
Woody Vine Stratum (Plot size: 30x30 ft)				
1.		¹ Indicators of hydr	ic soil and wetland hydrolo	ogy must be
2.			turbed or problematic.	587ast 20
0 = Tot	al Cover			
% Bare Ground in Herb Stratum 75 %		Hydrophytic Vege	tation Present?	X YesNo
Remarks:				

Depth	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10 YR 3/2	100				· ' <u></u>	Loam	with some road fill
3-5	10 YR 5/2	100					Sandy Clay	
5-18	10 YR 8/1	100					Sand	
						· ' <u></u>		
¹ Type: C=C	oncentration, D=De _l	pletion, RM=	Reduced Matrix	, CS=Cove	red or Co	ated Sand Grains.	² Location: PL	=Pore Lining, M=Matrix
Hydric Soil	Indicators						Indicat	tors for Problematic Hydric Soils ³ :
Histo	osol (A1)			Sandy	Gleyed I	Matrix (S4)		1 cm Muck (A9) (LRR I, J)
Histic	c Epipedon (A2)		•	Sandy	/ Redox (S5)		Coast Prairie Redox (A16) (LRR F, G, F
Black	K Histic (A3)		•	Stripp	ed Matrix	(S6)		Dark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)		•	Loamy	y Mucky N	Mineral (F1)		High Plains Depressions (F16)
Strati	ified Layers (A5) (LF	RR F)	•	Loamy	y Gleyed	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F,	G , H)	•	Deple	ted Matrix	k (F3)		Reduced Vertic (F18)
Deple	eted Below Dark Su	rface (A11)	•	Redox	d Dark Su	rface (F6)		Red Parent Material (TF2)
Thick	CDark Surface (A12)	•	Deple	ted Dark	Surface (F7)		Other (Explain in Remarks)
	ly Mucky Mineral (S	1)		Redox	c Depress	sions (F8)	³ Indica	tors of hydrophylic vegetation and
Sand	ly Maoky Milloral (O			I II alla D	Plains De	pressions (F16)	wetlan	d hydrology must be present, unless
	m Mucky Peat or Pe	eat (S2) (LRF	R G, H)	High F		. ,		,
2.5 c						3 of LRR H)	disturk	ped or problematic.
2.5 c 5 cm	m Mucky Peat or Pea Mucky Peat or Pea	t (S3) (LRR I					disturb	· · · · · · · · · · · · · · · · · ·
2.5 c 5 cm	m Mucky Peat or Pe	t (S3) (LRR I					disturk	· · · · · · · · · · · · · · · · · ·
2.5 cm 5 cm Restrictive I	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR I						ped or problematic.
2.5 c 5 cm Restrictive I Type: Depth (inc	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR I						· · · · · · · · · · · · · · · · · ·
2.5 c 5 cm Restrictive I Type: Depth (inc	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR I						ped or problematic.
2.5 c 5 cm Restrictive I Type: Depth (inc	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR I						ped or problematic.
2.5 cm 5 cm Restrictive I Type: Depth (inco	m Mucky Peat or Peat Mucky Peat or Peat Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR I						ped or problematic.
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2.5 cm 5 cm Restrictive I Type: Depth (inc Remarks: HYDROLOG	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) Ches):	t (S3) (LRR I	ed; check all tha	(MLi	RA 72 & 73	B of LRR H)	Hydric So	ped or problematic. Dil Present? Yes No
2.5 cm 5 cm Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): GY drology Indicators: cators (minimum of ace Water (A1)	t (S3) (LRR I	ed; check all tha	(MLi	RA 72 & 73	S of LRR H)	Hydric So	ped or problematic. Dil Present? Yes No
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2.5 cm 5 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I	Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) Ches): GY drology Indicators Cators (minimum of ace Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	t (S3) (LRR I	ed; check all tha	at apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhi: (where not	(B11) una (B13) Gulfide Och n Water T zospheres tilled) of Reduce	Sof LRR H) Solution (C1) Sable (C2) on Living Roots (C3) d Iron (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8)
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2.5 cm 5 cm Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) Ches): GY drology Indicators Cators (minimum of ace Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	t (S3) (LRR I	ed; check all tha	et apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence o	B11) una (B13) Sulfide Och Water T zospheres tilled) of Reduce Surface (Sof LRR H) Solution (C1) Solution (C2) Solution (C2) Solution (C4) Solution (C4) Solution (C4) Solution (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery
2.5 cm 5 cm Restrictive I Type: Depth (incomplete I) Remarks: HYDROLOG Wetland Hyde Primary Indice Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of actors (Minimum of	t (S3) (LRR I	ed; check all tha	et apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence o	B11) una (B13) Sulfide Och Water T zospheres tilled) of Reduce Surface (Sof LRR H) Solution (C1) Solution (C2) Solution (C2) Solution (C4) Solution (C4) Solution (C4) Solution (C4)	econdary Indicate	poil Present? Yes No Ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm 7 ype: Depth (incomplete limits) Remarks: HYDROLOG Wetland Hyd Primary Indicomplete limits Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of actors (Minimum of	t (S3) (LRR I	ed; check all tha	et apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence o	(B11) una (B13) Gulfide Oc n Water T zospheres tilled) of Reduce Surface (S of LRR H) Solor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR
2.5 cm 5 cm 7 ype: Depth (incomplete limits) Remarks: HYDROLOG Wetland Hyde Primary Indice Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of cace Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aei car-Stained Leaves (E vations: Care Present?	t (S3) (LRR I	ed; check all that	et apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence of Thin Muck Other (Expl	(B11) una (B13) Sulfide Oc n Water T zospheres tilled) of Reduce Surface (S of LRR H) Solution (C1) Sable (C2) on Living Roots (C3) d Iron (C4) C7) marks)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8 Drainage Patterns (B10) Oxidized Rhizospheres on Livir Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR

Applicant/Coverer Noveming Dept. of Transportation Section, Township, Ranges S22 movestigator(s); R. N. Newton, D. Souty Section, Township, Ranges S12 T3N R67W Sandform (hillsbyte); (errace, etc.) depression/fringe Local Relief (concave, convex, none); concave Slope (%); 0-1	Wetland De	eterminatio	n Data Forn	n - Great Pla	ains Regio	n		
mostspation(s) R. Newton, D. Soucy	Project/Site: I-25/I-80 Interchange		City/County: Ch	eyenne/Laramie	9	Sampling Date	: 7/31/2	019
	Applicant/Owner: Wyoming Dept. of Trans	sportation			State: WY	Sampling Point	: S-2	3
Subtregion (LRR):	Investigator(s): R. Newton, D. Soucy				Section, 1	ownship, Range: <u></u>	S12 T13N R67	7W
Note Classification: PEMA/PEMC Pemoratina Pemor	Landform (hillslope, terrace, etc.): depression	n/fringe	Local Relief (c	oncave, convex,	none): c	oncave	Slope (%):	0-1
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation Soil or Hydrology instruction of the Vegetation of Hydrology or Instructions, transects, important features, etc. SUMMARY OF FINDINGS. Attach site map showing sampling point locations, transects, important features, etc. Hydrolytic Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Avetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Avetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Avetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Avetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Avetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Avetland Hydrology Present? Yes X No Avetland Hydrology Present Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Subregion (LRR): G - Western Great Plains	<u>;</u>	Lat. 2239	959.9388	Long:	744591.6483	Datum: V	VY E
No.	Soil Map Unit Name: Poposhia-Trimad comple	x, 3 to 15 percent s	slopes		NW	I Classification:	PEMA/PE	EMC
Subminance Soil Or Hydrology Naturally problematic? (If needed, explain any answers in Remarks.)	Are climatic/hydrologic conditions on the site typ	ical for this time of	year? Ye	s X N	lo(<i>If n</i>	o, explain in Rema	rks)	
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.	Are Vegetation , Soil , or Hydro	ology signific	cantly disturbed?	Are "Normal Circ	cumstances" p	resent? Yes	Χ	No
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.	Are Vegetation , Soil , or Hydro	ology natura	lly problematic?	(If	needed, expla	ain any answers in l	Remarks.)	
Hydric Vegetation Present? Yes X No Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Is the Sampled Area within	SUMMARY OF FINDINGS - Attach site map sh	nowing sampling	point locations, t	ransects, impo	rtant features	s, etc.		
Is the Sampled Area within a Wetland? Yes X No Notland Hydrology Present? Yes X No Notland Hydrology Present Yes X Notland Hydrology Pres				•		•		
Netland Hydrology Present? Yes X No No		 No	Is the Sa	ampled Area with	nin a Wetland	? Ye:	s X No	
Name		-						_
Null-mapped depressional/fringe pallustrine emergent wetland PEM-8 around open water OW-2.								
Absolute Dominant Species Sp	Remarks:							
Absolute Species Spe	NWI-mapped depressional/fringe palustrine eme	rgent wetland PEN	Л-8 around open v	vater OW-2.				
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) (excluding FAC) Species That Are OBL, FACW, or FAC: 2 (A) (excluding FAC) Species Across All Strata: 2 (B)	VEGETATION - Use scientific names of plants	3.						
That Are OBL, FACW, or FAC: 2 (A) (excluding FAC-): Total Number of Dominant Species Across All Strata: 2 (B) Sapiling/Shrub Stratum (Plot size: 15x15 ft) Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100%								
	Tree Stratum (Plot size: 30x30 it)	% Cover Specie	es? Status		•		2	(4)
Total Number of Dominant Species Across All Strata: 2 (8)	1			· ·				_ (A)
Species Across All Strata: 2 (B) Species A	2							
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)	4.						2	(p)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)	" 			Openies Acros	33 All Ottata.	_		_ (b)
That Are OBL, FACW, or FAC: 100% (A/B)	·- <u></u>	0 = Total C	Cover					
Prevalence Index Worksheet:	Sanling/Shruh Stratum (Plot size: 15v15						100%	(A/R)
Total % Cover of: Multiply by:	1			mat / ii o obe	, 17.077, 0117	_	10070	_ (^, 0)
Total % Cover of: Multiply by:	··			Prevalence In	ndex Worksh	eet·		
OBL species 49 x 1 = 49	3.						Multiply b	ov:
FACW species 43 x 2 = 86 FAC species 2 x 3 = 6 FACU species 2 x 3 = 6 Tax species 2 x 3 = 6 Tax species 2 x 3 = 6 Tax species 2 x 3 = 7 Tax sp	4.							
Column Totals: Substitution Su								
Factor F		0 = Total C	Cover			2 x 3	3 = 6	_
1. Schoenoplectus pungens	Herb Stratum (Plot size: 5x5 ft)				es			
2. Triglochin maritima 3. N FACW 4. Distichlis spicata 5. Sporobolus airoides 6. Sporobolus airoides 7.		45 Y	OBL		es			
3 N FACW 4. Distichlis spicata 4. Rapid Test for Hydrophytic Vegetation 4. Rapid Test for Hydrophytic Vegetation 4. Rapid Test for Hydrophytic Vegetation 4. Morphological Radaptations (Provide supporting data in Remarks or on a separate sheet) 4. Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) 4. Problematic Hydrophytic Vegetation 4. Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) 4. Problematic Hydrophytic Vegetation 4. Morphological Adaptations (Explain) 4. Problematic Hydrophytic Vegetation (Explain)	2. Triglochin maritima	4 N	OBL	Column Totals	3:	94 (A	A) 141	1 (B)
4. Distichlis spicata 4. Distichlis spicata 5. Sporobolus airoides 6. Sporobolus airoides 7.	3. Hordeum jubatum	3 N	FACW		Prevaler		_	
X 2. Dominance Test is >50%. X 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 5.	4. Distichlis spicata	40 Y	FACW	Hydrophytic \	Vegetation In	dicators:		
X 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Problematic Hydrophytic Vegetation (Explain) 1.	5. Sporobolus airoides	2 N	FAC	Х	1. Rapid Test	for Hydrophytic Ve	getation	
4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Noody Vine Stratum (Plot size: 30x30 ft) 1.	6.			X	2. Dominance	e Test is >50%.		
porting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Noody Vine Stratum (Plot size: 30x30 ft) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. O = Total Cover	7.			X	3. Prevalence	lndex is <u><</u> 3.0¹		
Problematic Hydrophytic Vegetation (Explain) 94 = Total Cover Noody Vine Stratum (Plot size: 30x30 ft) 1.	8.						•	
94 = Total Cover	9.				porting data ir	n Remarks or on a	separate shee	et)
Noody Vine Stratum (Plot size: 30x30 ft) 1.	0.			<u></u>	Problematic F	Hydrophytic Vegetat	tion (Explain)	
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1		94 = Total C	Cover					
present, unless disturbed or problematic. 0 = Total Cover	Woody Vine Stratum (Plot size: 30x30 ft	_)						
0 = Total Cover	1			¹ Indic	ators of hydric	soil and wetland hyd	rology must be	<u>;</u>
	2			prese	nt, unless distu	rbed or problematic.		
% Bare Ground in Herb Stratum 6 % Hydronhytic Vegetation Present? X Yes No.		0 = Tota	l Cover					
Tryarophytic vegetation resent.	% Bare Ground in Herb Stratum 6	%		Hydro	phytic Vegeta	tion Present?	X Yes	No
Remarks:	Remarks:							

Histosol (A1) Histic Epipedon (Black Histic (A3) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (X Depleted Below E Thick Dark Surfac Sandy Mucky Mir 2.5 cm Mucky Pe 5 cm Mucky Peat Restrictive Layer: (if ob Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi	3/1 80 5/1 100 5/1 100 100 100 100 100 100 100 100	- - - - - - - - - - - -	San Strip Loa Loa Dep X Rec Dep Rec Higl	ndy Gleyed I ndy Redox (i pped Matrix amy Mucky I amy Gleyed oleted Matrix dox Dark Su oleted Dark dox Depress	Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Irface (F6) Surface (F7) sions (F8) pressions (F16)	Indicators Co Da Hig Re Re Ot 3Indicator wetland h	Remarks Pore Lining, M=Matrix s for Problematic Hydric Soils ³ : cm Muck (A9) (LRR I, J) past Prairie Redox (A16) (LRR F, G, H) park Surface (S7) (LRR G) gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) adduced Vertic (F18) add Parent Material (TF2) ther (Explain in Remarks) are of hydrophylic vegetation and hydrology must be present, unless or problematic.
1 Type: C=Concentration Hydric Soil Indicators Histosol (A1) Histic Epipedon (A1) Histic Epipedon (A2) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (A2) Thick Dark Surfact Sandy Mucky Mir 2.5 cm Mucky Peat 5 cm Mucky Peat Restrictive Layer: (if ob Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi	(A2) (A4) (A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LRR t or Peat (S3) (LRR	=Reduced Matrix,	San San San Loa Loa Dep X Rec Dep Rec High	vered or Co andy Gleyed I andy Redox (see the context of the con	ated Sand Grains. Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) urface (F6) Surface (F7) sions (F8) pressions (F16)	loamy sand 2Location: PL=P Indicator: Co Da Hig Re Re Ot 3Indicator wetland h	s for Problematic Hydric Soils ³ : cm Muck (A9) (LRR I, J) past Prairie Redox (A16) (LRR F, G, H) park Surface (S7) (LRR G) gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) adduced Vertic (F18) ad Parent Material (TF2) ther (Explain in Remarks) ars of hydrophylic vegetation and hydrology must be present, unless
1Type: C=Concentration Hydric Soil Indicators Histosol (A1) Histic Epipedon (Black Histic (A3) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (X Depleted Below D Thick Dark Surfact Sandy Mucky Mir 2.5 cm Mucky Peat 5 cm Mucky Peat Restrictive Layer: (if ob Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indices	(A2) (A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LRR t or Peat (S3) (LRR	- - - - - - - - - - - -	San Strip Loa Loa Dep X Rec Dep Rec Higl	ndy Gleyed I ndy Redox (S pped Matrix amy Mucky I amy Gleyed bleted Matrix dox Dark Su bleted Dark dox Depress h Plains De	Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Irface (F6) Surface (F7) sions (F8) pressions (F16)	² Location: PL=P Indicators 1 c Co Da Hig	s for Problematic Hydric Soils ³ : cm Muck (A9) (LRR I, J) past Prairie Redox (A16) (LRR F, G, H) park Surface (S7) (LRR G) gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) adduced Vertic (F18) ad Parent Material (TF2) ther (Explain in Remarks) ars of hydrophylic vegetation and hydrology must be present, unless
Hydric Soil Indicators Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (A2) Thick Dark Surfact Sandy Mucky Mir 2.5 cm Mucky Peat Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indices	(A2) (A4) (A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LRR t or Peat (S3) (LRR	- - - - - - - - - - - -	San Strip Loa Loa Dep X Rec Dep Rec Higl	ndy Gleyed I ndy Redox (S pped Matrix amy Mucky I amy Gleyed bleted Matrix dox Dark Su bleted Dark dox Depress h Plains De	Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Irface (F6) Surface (F7) sions (F8) pressions (F16)	Indicators Co Da Hig Re Re Ot 3Indicator wetland h	s for Problematic Hydric Soils ³ : cm Muck (A9) (LRR I, J) past Prairie Redox (A16) (LRR F, G, H) park Surface (S7) (LRR G) gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) adduced Vertic (F18) ad Parent Material (TF2) ther (Explain in Remarks) ars of hydrophylic vegetation and hydrology must be present, unless
Hydric Soil Indicators Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (A2) Thick Dark Surfact Sandy Mucky Mir 2.5 cm Mucky Peat Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indices	(A2) (A4) (A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LRR t or Peat (S3) (LRR	- - - - - - - - - - - -	San Strip Loa Loa Dep X Rec Dep Rec Higl	ndy Gleyed I ndy Redox (S pped Matrix amy Mucky I amy Gleyed bleted Matrix dox Dark Su bleted Dark dox Depress h Plains De	Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Irface (F6) Surface (F7) sions (F8) pressions (F16)	Indicators Co Da Hig Re Re Ot 3Indicator wetland h	s for Problematic Hydric Soils ³ : cm Muck (A9) (LRR I, J) past Prairie Redox (A16) (LRR F, G, H) park Surface (S7) (LRR G) gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) adduced Vertic (F18) ad Parent Material (TF2) ther (Explain in Remarks) ars of hydrophylic vegetation and hydrology must be present, unless
Hydric Soil Indicators Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (A2) Thick Dark Surfact Sandy Mucky Mir 2.5 cm Mucky Peat Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indices	(A2) (A4) (A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LRR t or Peat (S3) (LRR	- - - - - - - - - - - -	San Strip Loa Loa Dep X Rec Dep Rec Higl	ndy Gleyed I ndy Redox (S pped Matrix amy Mucky I amy Gleyed bleted Matrix dox Dark Su bleted Dark dox Depress h Plains De	Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Irface (F6) Surface (F7) sions (F8) pressions (F16)	Indicators Co Da Hig Re Re Ot 3Indicator wetland h	s for Problematic Hydric Soils ³ : cm Muck (A9) (LRR I, J) past Prairie Redox (A16) (LRR F, G, H) park Surface (S7) (LRR G) gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) adduced Vertic (F18) ad Parent Material (TF2) ther (Explain in Remarks) ars of hydrophylic vegetation and hydrology must be present, unless
Hydric Soil Indicators Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (A2) Thick Dark Surfact Sandy Mucky Mir 2.5 cm Mucky Peat Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indices	(A2) (A4) (A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LRR t or Peat (S3) (LRR	- - - - - - - - - - - -	San Strip Loa Loa Dep X Rec Dep Rec Higl	ndy Gleyed I ndy Redox (S pped Matrix amy Mucky I amy Gleyed bleted Matrix dox Dark Su bleted Dark dox Depress h Plains De	Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Irface (F6) Surface (F7) sions (F8) pressions (F16)	Indicators Co Da Hig Re Re Ot 3Indicator wetland h	s for Problematic Hydric Soils ³ : cm Muck (A9) (LRR I, J) past Prairie Redox (A16) (LRR F, G, H) park Surface (S7) (LRR G) gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) adduced Vertic (F18) ad Parent Material (TF2) ther (Explain in Remarks) ars of hydrophylic vegetation and hydrology must be present, unless
Hydric Soil Indicators Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (A2) Thick Dark Surfact Sandy Mucky Mir 2.5 cm Mucky Peat Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indices	(A2) (A4) (A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LRR t or Peat (S3) (LRR	- - - - - - - - - - - -	San Strip Loa Loa Dep X Rec Dep Rec Higl	ndy Gleyed I ndy Redox (S pped Matrix amy Mucky I amy Gleyed bleted Matrix dox Dark Su bleted Dark dox Depress h Plains De	Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Irface (F6) Surface (F7) sions (F8) pressions (F16)	Indicators Co Da Hig Re Re Ot 3Indicator wetland h	s for Problematic Hydric Soils ³ : cm Muck (A9) (LRR I, J) past Prairie Redox (A16) (LRR F, G, H) park Surface (S7) (LRR G) gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) adduced Vertic (F18) ad Parent Material (TF2) ther (Explain in Remarks) ars of hydrophylic vegetation and hydrology must be present, unless
Hydric Soil Indicators Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (A2) Thick Dark Surfact Sandy Mucky Mir 2.5 cm Mucky Peat Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indices	(A2) (A4) (A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LRR t or Peat (S3) (LRR	- - - - - - - - - - - -	San Strip Loa Loa Dep X Rec Dep Rec Higl	ndy Gleyed I ndy Redox (S pped Matrix amy Mucky I amy Gleyed bleted Matrix dox Dark Su bleted Dark dox Depress h Plains De	Matrix (S4) S5) (S6) Mineral (F1) Matrix (F2) x (F3) Irface (F6) Surface (F7) sions (F8) pressions (F16)	Indicators Co Da Hig Re Re Ot 3Indicator wetland h	s for Problematic Hydric Soils ³ : cm Muck (A9) (LRR I, J) past Prairie Redox (A16) (LRR F, G, H) park Surface (S7) (LRR G) gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) adduced Vertic (F18) ad Parent Material (TF2) ther (Explain in Remarks) ars of hydrophylic vegetation and hydrology must be present, unless
Histosol (A1) Histic Epipedon (Black Histic (A3) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (X Depleted Below E Thick Dark Surfac Sandy Mucky Mir 2.5 cm Mucky Pe 5 cm Mucky Peat Restrictive Layer: (if ob Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi	e (A4) (A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LRR t or Peat (S3) (LRR	- - - - - RR G, H)	San Stril Loa Loa Dep X Rec Dep Rec Higl	ndy Redox (in pped Matrix in my Mucky in my Gleyed poleted Matrix dox Dark Surpleted Dark dox Depressible Plains Depressibn Plains Pl	S5) (S6) Mineral (F1) Matrix (F2) x (F3) Irface (F6) Surface (F7) sions (F8) pressions (F16)	Land to the second seco	cm Muck (A9) (LRR I, J) past Prairie Redox (A16) (LRR F, G, H) park Surface (S7) (LRR G) gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) adduced Vertic (F18) add Parent Material (TF2) ther (Explain in Remarks) ars of hydrophylic vegetation and hydrology must be present, unless
Histosol (A1) Histic Epipedon (Black Histic (A3) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (X Depleted Below E Thick Dark Surfac Sandy Mucky Mir 2.5 cm Mucky Pe 5 cm Mucky Peat Restrictive Layer: (if ob Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi	e (A4) (A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LRR t or Peat (S3) (LRR	- - - - - RR G, H)	San Stril Loa Loa Dep X Rec Dep Rec Higl	ndy Redox (in pped Matrix in my Mucky in my Gleyed poleted Matrix dox Dark Surpleted Dark dox Depressible Plains Depressibn Plains Pl	S5) (S6) Mineral (F1) Matrix (F2) x (F3) Irface (F6) Surface (F7) sions (F8) pressions (F16)	Land to the second seco	cm Muck (A9) (LRR I, J) past Prairie Redox (A16) (LRR F, G, H) park Surface (S7) (LRR G) gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) adduced Vertic (F18) add Parent Material (TF2) ther (Explain in Remarks) ars of hydrophylic vegetation and hydrology must be present, unless
Histic Epipedon (Black Histic (A3) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (X Depleted Below E Thick Dark Surface Sandy Mucky Mir 2.5 cm Mucky Peat 5 cm Mucky Peat Restrictive Layer: (if ob Type: Depth (inches): Remarks:	e (A4) (A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LRR t or Peat (S3) (LRR	- - - - - RR G, H)	San Stril Loa Loa Dep X Rec Dep Rec Higl	ndy Redox (in pped Matrix in my Mucky in my Gleyed poleted Matrix dox Dark Surpleted Dark dox Depressible Plains Depressibn Plains Pl	S5) (S6) Mineral (F1) Matrix (F2) x (F3) Irface (F6) Surface (F7) sions (F8) pressions (F16)	Co Da Hig Re Re Ot 3Indicator wetland h	past Prairie Redox (A16) (LRR F, G, H) ark Surface (S7) (LRR G) gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) adduced Vertic (F18) ad Parent Material (TF2) ther (Explain in Remarks) ars of hydrophylic vegetation and hydrology must be present, unless
Black Histic (A3) Hydrogen Sulfide Stratified Layers 1 cm Muck (A9) (X Depleted Below Dependent of the Community of the Comm	e (A4) (A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LRR t or Peat (S3) (LRR	- - - - - RR G, H)	Loa Loa Dep X Rec Dep Rec High	amy Mucky Namy Gleyed Deted Matrix Doubleted Matrix Doubleted Dark Doubleted Dark Doubleted Dark Doubleted Dark Doubleted Dark Doubleted Dark	Mineral (F1) Matrix (F2) x (F3) urface (F6) Surface (F7) sions (F8) pressions (F16)	Da Hig Re Re Ot	gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Educed Vertic (F18) Ed Parent Material (TF2) Ether (Explain in Remarks) Ers of hydrophylic vegetation and hydrology must be present, unless
Stratified Layers 1 cm Muck (A9) (X Depleted Below	(A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LR t or Peat (S3) (LRR	- - - - - RR G, H)	Loa Dep X Rec Dep Rec High	amy Gleyed bleted Matrix dox Dark Su bleted Dark dox Depress h Plains De	Matrix (F2) x (F3) urface (F6) Surface (F7) sions (F8) pressions (F16)	Hig Re Re Ot ³ Indicator wetland h	gh Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Educed Vertic (F18) Ed Parent Material (TF2) Ether (Explain in Remarks) Ers of hydrophylic vegetation and Enydrology must be present, unless
Stratified Layers 1 cm Muck (A9) (X Depleted Below	(A5) (LRR F) (LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LR t or Peat (S3) (LRR	- - - - - RR G, H)	Loa Dep X Rec Dep Rec High	amy Gleyed bleted Matrix dox Dark Su bleted Dark dox Depress h Plains De	Matrix (F2) x (F3) urface (F6) Surface (F7) sions (F8) pressions (F16)	Re Re Ot 31 Indicator wetland h	(LRR H outside of MLRA 72 & 73) Educed Vertic (F18) Ed Parent Material (TF2) Eher (Explain in Remarks) Ers of hydrophylic vegetation and Enydrology must be present, unless
1 cm Muck (A9) (X Depleted Below I Thick Dark Surfact Sandy Mucky Mir 2.5 cm Mucky Peat 5 cm Mucky Peat Restrictive Layer: (if ob Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi	(LRR F, G, H) Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LR t or Peat (S3) (LRR	- - - - - RR G, H)	X Red Dep Red High	oleted Matrix dox Dark Su oleted Dark dox Depress h Plains De	x (F3) Irface (F6) Surface (F7) sions (F8) pressions (F16)	Re Re Ot ³ Indicator wetland h	educed Vertic (F18) Ind Parent Material (TF2) Ither (Explain in Remarks) Its of hydrophylic vegetation and Indydrology must be present, unless
X Depleted Below I Thick Dark Surface Sandy Mucky Mir 2.5 cm Mucky Peat 5 cm Mucky Peat Restrictive Layer: (if ob Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi	Dark Surface (A11) ce (A12) neral (S1) eat or Peat (S2) (LR t or Peat (S3) (LRR	- - - - - RR G, H)	Dep Red High	oleted Dark dox Depress h Plains De	Surface (F7) sions (F8) pressions (F16)	Re Ot 3Indicator wetland h	nd Parent Material (TF2) Ther (Explain in Remarks) Thers of hydrophylic vegetation and hydrology must be present, unless
Sandy Mucky Mir 2.5 cm Mucky Pe 5 cm Mucky Peat Restrictive Layer: (if ob Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi	neral (S1) eat or Peat (S2) (LR t or Peat (S3) (LRR	_	Red High	dox Depress h Plains De _l	sions (F8) pressions (F16)	³ Indicator wetland h	rs of hydrophylic vegetation and hydrology must be present, unless
2.5 cm Mucky Pe 5 cm Mucky Peat Restrictive Layer: (if ob Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi	eat or Peat (S2) (LR t or Peat (S3) (LRR	_	Higl	h Plains De	pressions (F16)	wetland h	nydrology must be present, unless
2.5 cm Mucky Pe 5 cm Mucky Peat Restrictive Layer: (if ob Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi	eat or Peat (S2) (LR t or Peat (S3) (LRR	_	Higl	h Plains De	pressions (F16)	wetland h	nydrology must be present, unless
Restrictive Layer: (if ob Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi		R F)	(N	VILRA 72 & 7:	3 of LRR H)	disturbed	l or problematic.
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi	eserved)						
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi							
Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indi							
Remarks: HYDROLOGY Wetland Hydrology Indi						Hydric Soil	Present? Yes X No
HYDROLOGY Wetland Hydrology Indi						11,411.0 00	11000111 100 77
Wetland Hydrology Ind							
Wetland Hydrology Ind							
Primary Indicators (minir	icators:						
	num of one is requi	ired; check all that	t apply)		S	econdary Indicators	s (minimum of two required)
X Surface Water (A	N1)		Salt Crus	st (B11)			Surface Soil Cracks (B6)
High Water Table	∍ (A2)	/	Aquatic F	Fauna (B13))		Sparsley Vegetated Concave Surf. (B8)
Saturation (A3)		H	Hydroger	n Sulfide Od	dor (C1)		Drainage Patterns (B10)
Water Marks (B1)		Dry-Seas	son Water T	able (C2)		Oxidized Rhizospheres on Living
Sediment Deposi	its (B2)	_X_0	Oxidized F	Rhizospheres	on Living Roots (C3)		Roots (C3) (where tilled)
Drift Deposits (B3	3)	((where n	not tilled)			Crayfish Burrows (C8)
Algal Mat or Crus	st (B4)	F	Presence	e of Reduce	d Iron (C4)		Saturation Visible on Aerial Imagery (C9
Iron Deposits (B5	5)	?	Thin Muc	ck Surface (C7)	X	Geomorphic Position (D2)
Inundation Visible	e on Aerial Imagery	(B7)(Other (Ex	xplain in Re	marks)	X	FAC-Neutral Test (D5)
Water-Stained Le	eaves (B9)						Frost-Heave Hummocks (D7) (LRR F)
Field Observations:							
Surface Water Present?		Yes	Χ	No	Depth (inches)	3	Wetland Hydrology
Water Table Present?		-	X	No	Depth (inches)	14	Present?
Saturation Present? (incl	ludes capillary fring	_		No	Depth (inches)	surface	X Yes No

Wetland	Determi	nation Da	ata Forr	n - Grea	nt Plains Regio	on	
Project/Site: I-25/I-80 Interchange		City/	County: Ch	eyenne/La	ıramie	Sampling Date	7/31/2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation	n			State: WY	Sampling Point	S-24
Investigator(s): R. Newton, D. Soucy					Section,	Township, Range: S	12 T13N R67W
Landform (hillslope, terrace, etc.): minor	slope	Lo	cal Relief <i>(c</i>	oncave, co	onvex, none): ı	none	Slope (%): 0-2
Subregion (LRR): G - Western Great Pla	ins	Lat.	224	469.3888	Long:	746439.1011	Datum: WY E
Soil Map Unit Name: Poposhia-Trimad com	plex, 3 to 15	percent slopes	5		NV	/I Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for thi	is time of year?	Ye	s X	No (If I	no, explain in Remar	rks)
Are Vegetation , Soil , or Hy	drology	significantly	disturbed?	Are "Norma	al Circumstances"	present? Yes	X No
Are Vegetation , Soil , or Hy		naturally pro				Iain any answers in I	Remarks)
SUMMARY OF FINDINGS - Attach site map		_		traneocte			tomanto.)
-			iocations,	ii aiisecis,	important leature	5, 810.	
Hydrophytic Vegetation Present? Yes	No_X	_					., .,
Hydric Soil Present? Yes _	No_X		Is the S	ampled Are	ea within a Wetland	d? Yes	s No_X_
Wetland Hydrology Present? Yes	No_X	<u>(</u>					
Remarks:							
Paired upland point for PEM-8.							
VEGETATION - Use scientific names of pla				- ·	-		
Tree Stratum (Plot size: 30x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status		nce Test Worksho of Dominant Spec		
1	70 OOVCI	орсоюз:	Otatus		OBL, FACW, or F		0 (A)
2					ng FAC-):		(A)
3				Tatal Niv	b.o		
4					mber of Dominant Across All Strata:		1 (B)
5.				Ороско	, toroco , in otrata.	_	
	0 :	= Total Cover					
<u>—</u> <u>Sapling/Shrub Stratum</u> (Plot size: 15x	15 ft)	Total Gover			of Dominant Speci OBL, FACW, or F		0% (A/B)
1	1311)			That Are	OBL, I ACVV, OI I		(A/B)
2				Provalo	nce Index Worksh	noot:	
3.				i ievale	Total % Cover o		Multiply by:
4				OBL	species	0 x 1	
5.					species	18 x 2	
·	0 :	= Total Cover		FAC	species	$\frac{10 \times 2}{0 \times 3}$	
Herb Stratum (Plot size: 5x5 ft)		Total Gover			species	12 x 4	
1. Euphorbia esula	70	Υ	NI	UPL	species	70 x 5	
Cirsium arvense	8	N	FACU	Column	•	100 (A	
3. Juncus balticus	13	N	FACW	Column		nce Index = B/A =	4.3
Distichlis spicata	3	N	FACW	Hydroni	hytic Vegetation I		4.0
5. Chenopodium album	4	N	FACU	riyaropi	-	t for Hydrophytic Ve	retation
6. Hordeum jubatum	2	N	FACW			e Test is >50%.	getation
7.			TAOW			e Index is <3.01	
8.						gical Adaptations¹ (Pi	ovide sup-
9.						in Remarks or on a s	
0.					Problematic	Hydrophytic Vegetat	ion (Explain)
	100 :	= Total Cover				, a. opiny no vogotat	(<u>-</u>)
Woody Vine Stratum (Plot size: 30x30		. 5.61 50001					
1	<u>""</u>)				1		
2						soil and wetland hydrurbed or problematic.	ology must be
	0	= Total Cove		-	present, unless disti	urbed or problematic.	
% Bare Ground in Herb Stratum () %	- 10tal C0V6	J1		Hydrophytic Vocata	ation Present?	Voc Y No
Daie Glouila III Helb Stratuili (, /0				Hydrophytic Vegeta	adon Fresenti	Yes X No
Paragraphica :							
Remarks:	IDL 6	li ! -					
Species with no indicator (NI) are treated as t	JEL IOI (NIS A	มาสเทราร.					

Profile Desc	cription: (Describe to	the depth nee	ded to docume	nt the indi	cator or	confirm the absen	ce of indicators.)	
Depth	Matrix		ļ	Redox Fea	atures			
(inches)	Color (moist)	% Co	lor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	10 YR 3/3	100					sandy loam	
8-18	10 YR 5/3	100					sandy clay	
¹ Type: C=Co	oncentration, D=Depl	etion, RM=Red	luced Matrix, C	S=Covere	ed or Coa	ated Sand Grains.	² Location: PL=F	Pore Lining, M=Matrix
Hydric Soil	Indicators						Indicato	rs for Problematic Hydric Soils ³ :
_ ·	sol (A1)			Sandv	Gleved N	latrix (S4)		cm Muck (A9) (LRR I, J)
	Epipedon (A2)				Redox (S			past Prairie Redox (A16) (LRR F, G, H)
	(Histic (A3)			<u> </u>	d Matrix	,		ark Surface (S7) (LRR G)
	ogen Sulfide (A4)					lineral (F1)		gh Plains Depressions (F16)
	ified Layers (A5) (LRF	RF)		_	-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, G	-	_	_	ed Matrix		R	educed Vertic (F18)
	eted Below Dark Surfa		_	_		face (F6)		ed Parent Material (TF2)
	Dark Surface (A12)	200 (111.)	_			Surface (F7)		ther (Explain in Remarks)
	y Mucky Mineral (S1)		_	_	Depressi			
	m Mucky Peat or Pea			_	•	ressions (F16)		rs of hydrophylic vegetation and hydrology must be present, unless
	Mucky Peat or Peat			_		of LRR H)		d or problematic.
	-					,	1	
_	Layer: (if observed)							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes No X
Remarks:								
HYDROLOG	v							
	drology Indicators:							
_	cators (minimum of or	ne is required:	check all that a	annly)		s	econdary Indicator	s (minimum of two required)
	nce Water (A1)	10 10 10qanoa,		ilt Crust (E	211)	J	occinally majorion	Surface Soil Cracks (B6)
	Water Table (A2)			juatic Faur	•			Sparsley Vegetated Concave Surf. (B8)
	ration (A3)			drogen Su		or (C1)		Drainage Patterns (B10)
	er Marks (B1)			v-Season				Oxidized Rhizospheres on Living
—	ment Deposits (B2)			•		on Living Roots (C3)		Roots (C3) (where tilled)
	Deposits (B3)			here not t	•	on Living Roots (C3)		Crayfish Burrows (C8)
	Mat or Crust (B4)		•		•	l Iron (C4)		- ` '
— ·	, ,			in Muck S		` ,		Saturation Visible on Aerial Imagery (C9)
	Deposits (B5) dation Visible on Aeria	l Imaganı (D7)			`	,		Geomorphic Position (D2) FAC-Neutral Test (D5)
	er-Stained Leaves (B9	0 , ,		her (Expla	IIII III Kei	ilaiks)		•
wate	er-Stained Leaves (Be	')					_	Frost-Heave Hummocks (D7) (LRR F)
Field Observ								
Surface Wat	er Present?		Yes	_		Depth (inches)		Wetland Hydrology
Water Table			Yes	No		Depth (inches)		Present?
Saturation Pr	resent? (includes cap	illary fringe)	Yes	No	X	Depth (inches)		Yes <u>X</u> No
Remarks:								

Wetland Determinati	on Data Form	ı - Great Plains Regi	on	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Transportation		State: WY	Sampling Point:	S-25
Investigator(s): R. Newton, D. Soucy		Section	, Township, Range: <u>S1</u>	2 T13N R67W
Landform (hillslope, terrace, etc.): depression	Local Relief (co	ncave, convex, none):	concave	Slope (%): 0
Subregion (LRR): G - Western Great Plains	Lat. 2244	59.3737 Long:	746441.3568	Datum: WY E
Soil Map Unit Name: Poposhia-Trimad complex, 3 to 15 percei	nt slopes	N'	WI Classification:	Open Water
Are climatic/hydrologic conditions on the site typical for this time	of year? Yes	X No(If	no, explain in Remark	rs)
Are Vegetation, Soil, or Hydrologysign	nificantly disturbed? A	re "Normal Circumstances'	' present? Yes	X No
Are Vegetation , Soil , or Hydrology natu	urally problematic?	(If needed, exp	olain any answers in R	emarks.)
SUMMARY OF FINDINGS - Attach site map showing samplin	ng point locations, tr	ansects, important featur	es, etc.	
Hydrophytic Vegetation Present? Yes X No				
Hydric Soil Present? Yes No	Is the Sa	mpled Area within a Wetlar	nd? Yes	No X
Wetland Hydrology Present? Yes X No		•	•	
Remarks:				
NHD-mapped open water OW-2				
VEGETATION - Use scientific names of plants.				
	minant Indicator ecies? Status	Dominance Test Worksh Number of Dominant Spe That Are OBL, FACW, or (excluding FAC-):	cies	1 (A)
3		Total Number of Dominan Species Across All Strata		1 (B)
O = Tota Sapling/Shrub Stratum (Plot size: 15x15 ft) 1.	al Cover	Percent of Dominant Spec That Are OBL, FACW, or	FAC:	100% (A/B)
2		Prevalence Index Works		N.A. alatinala a las as
3		Total % Cover (Multiply by:
4		OBL species	4 x 1 : 0 x 2 :	
0 = Tota	al Cover	FACW species FAC species	$\begin{array}{ccc} & 0 & x & 2 \\ \hline & 0 & x & 3 \end{array}$	
Herb Stratum (Plot size: 5x5 ft)	ii Covei	FACU species	$\frac{0}{0}$ $\times 4$	
	Y OBL	UPL species	0 x 5 =	
2.	T OBE	Column Totals:	4 (A)	
3.			ence Index = B/A =	1.0
4.		Hydrophytic Vegetation	Indicators:	
5.	<u> </u>	X 1. Rapid Te	st for Hydrophytic Veg	etation
6.		X 2. Dominan	ce Test is >50%.	
7.			ce Index is ≤3.0¹	
8			gical Adaptations¹ (Pro	
9		porting data	in Remarks or on a se	eparate sneet)
0 4 = Tota	al Cover	Problematic	: Hydrophytic Vegetatio	on (Explain)
Woody Vine Stratum (Plot size: 30x30 ft)				
1			ic soil and wetland hydro turbed or problematic.	logy must be
0 = To	otal Cover	present, unless uis	ta. sea or prosicinatio.	
% Bare Ground in Herb Stratum96%		Hydrophytic Vege	tation Present?	X Yes No
Remarks:		l		

(inches)	Matrix		Redox Fe	eatures			
	Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
Type: C=Co	oncentration, D=Depletion, RM	=Reduced Matrix	., CS=Cover	red or Coate	ed Sand Grains.	² Location: PL=I	Pore Lining, M=Matrix
Hydric Soil I	ndicators					Indicato	rs for Problematic Hydric Soils ³ :
Histo	sol (A1)		Sandy	Gleyed Ma	itrix (S4)	1	cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)	•	—— Sandy	Redox (S5)	c	oast Prairie Redox (A16) (LRR F, G, H)
Black	Histic (A3)	•	Strippe	ed Matrix (S	86)	D	ark Surface (S7) (LRR G)
Hydro	gen Sulfide (A4)	•	Loamy	Mucky Mir	neral (F1)	——	igh Plains Depressions (F16)
	fied Layers (A5) (LRR F)	•		, Gleyed Ma			(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F, G, H)	•		ted Matrix (R	educed Vertic (F18)
Deple	ted Below Dark Surface (A11)	•	Redox	Dark Surfa	ice (F6)	R	ed Parent Material (TF2)
	Dark Surface (A12)	•	Deplet	ted Dark Su	rface (F7)		ther (Explain in Remarks)
Sand	y Mucky Mineral (S1)	•	Redox	Depression	ns (F8)	3Indicate	ors of hydrophylic vegetation and
	n Mucky Peat or Peat (S2) (LF	RR G, H)			essions (F16)		hydrology must be present, unless
	Mucky Peat or Peat (S3) (LRR			RA 72 & 73 o		disturbe	d or problematic.
Postrictive I	quare (if absorpted)					1	
	.ayer: (if observed)						
Type:							
Denth (inc	hes):					Hudria Cai	I Procent? Ves No
Depth (inc	hes):					Hydric Soi	I Present? Yes No _
Remarks:	<u> </u>					Hydric Soi	I Present? Yes No
Remarks:	<u> </u>					Hydric Soi	I Present? Yes No
Remarks: Soils not inve	estigated.					Hydric Soi	I Present? Yes No
Remarks: Soils not inve	estigated.					Hydric Soi	I Present? Yes No
Remarks: Soils not inve	estigated.	ired; check all tha	at apply)		S		I Present? Yes No
Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic	estigated. Y Irology Indicators:		at apply) Salt Crust (B11)	s		
Remarks: Soils not inve	estigated. Y Irology Indicators: ators (minimum of one is requi			•	s		s (minimum of two required)
Remarks: Soils not inve	estigated. Y Irology Indicators: ators (minimum of one is required to the content of the conte		Salt Crust (una (B13)			s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Remarks: Soils not invent HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur	estigated. Y Irology Indicators: ators (minimum of one is require ce Water (A1) Water Table (A2)		Salt Crust (Aquatic Fau	una (B13) Sulfide Odor	· (C1)		s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate	estigated. Y Irology Indicators: ators (minimum of one is required to the control of the contr		Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor	una (B13) Sulfide Odor n Water Tab	· (C1)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Remarks: Soils not invent HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir	estigated. Y Irology Indicators: ators (minimum of one is required water (A1) Water Table (A2) ation (A3) r Marks (B1)		Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor	una (B13) Sulfide Odor n Water Tab zospheres on	(C1) ole (C2)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Remarks: Soils not invent HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I	estigated. Y Irology Indicators: ators (minimum of one is required to the second sec		Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Oxidized Rhiz	una (B13) Sulfide Odor Nater Tab zospheres on tilled)	(C1) ole (C2) Living Roots (C3)	econdary Indicator	S (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Remarks: Soils not invent HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I	estigated. Y Irology Indicators: ators (minimum of one is required) ators (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3)		Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Oxidized Rhiz (where not	una (B13) Sulfide Odor n Water Tab zospheres on tilled) f Reduced	(C1) ble (C2) Living Roots (C3) fron (C4)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Remarks: Soils not invent HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I Algal Iron I	estigated. Y Irology Indicators: ators (minimum of one is required water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)		Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence o	una (B13) Sulfide Odor N Water Tab zospheres on tilled) f Reduced Surface (C7	c (C1) ple (C2) Living Roots (C3) fron (C4)	econdary Indicator	S (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (
Remarks: Soils not invented by the second se	estigated. Y Irology Indicators: ators (minimum of one is required to the second sec		Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence o Thin Muck	una (B13) Sulfide Odor N Water Tab zospheres on tilled) f Reduced Surface (C7	c (C1) ple (C2) Living Roots (C3) fron (C4)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2)
Remarks: Soils not invent HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate	estigated. Y Irology Indicators: ators (minimum of one is required to the water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aerial Imagery r-Stained Leaves (B9)		Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence o Thin Muck	una (B13) Sulfide Odor N Water Tab zospheres on tilled) f Reduced Surface (C7	c (C1) ple (C2) Living Roots (C3) fron (C4)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) FAC-Neutral Test (D5)
Remarks: Soils not invented by the second se	estigated. Y Irology Indicators: ators (minimum of one is required to the water (A1) Water Table (A2) ation (A3) If Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aerial Imagery Ir-Stained Leaves (B9) Vations:		Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence o Thin Muck	una (B13) Sulfide Odor Nater Tab Zospheres on tilled) f Reduced Surface (C7 ain in Rema	c (C1) ple (C2) Living Roots (C3) fron (C4)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) FAC-Neutral Test (D5)
Remarks: Soils not invented by the second se	estigated. Y Irology Indicators: ators (minimum of one is required to the second sec	(B7)	Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence o Thin Muck S Other (Expl	Sulfide Odor Water Tab zospheres on tilled) f Reduced Surface (C7 ain in Rema	c (C1) ble (C2) Living Roots (C3) dron (C4) c) arks)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F

Wetland	Determii	nation Da	ata Forn	n - Gre	at Plains Re	gion		
Project/Site: I-25/I-80 Interchange		City	/County: Ch	eyenne/L	aramie	Sampling Da	ate: 8/1/2 0	019
Applicant/Owner: Wyoming Dept. of Tr	ansportation				State: W	Y Sampling Po	oint: S-2	26
Investigator(s): R. Newton, D. Soucy					Section	on, Township, Range	S11 T13N R6	7W
Landform (hillslope, terrace, etc.): depres	sion	Lo	cal Relief (c	oncave, c	onvex, none):	concave	Slope (%):	: 0-1
Subregion (LRR): G - Western Great Pla	ins	Lat.	. 2208	351.0461	Long:	742558.744	Datum: \	WYE
Soil Map Unit Name: Merden silty clay loam	, 0 to 3 perce	nt slopes				NWI Classification:	PEMA/PE	EMC
Are climatic/hydrologic conditions on the site	typical for this	time of year?	? Ye	s <u>X</u>	No	(If no, explain in Rer	narks)	
Are Vegetation , Soil , or Hy	drology	significantly	disturbed?	Are "Norm	al Circumstance	es" present? Yes	X	No
Are Vegetation , Soil , or Hy	drology	naturally pro	oblematic?		(If needed, e	explain any answers	in Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing sa	mpling point	locations, t	ransects.	important feat	ures, etc.	•	
	X No				•	·		
`	X No		Is the Sa	ampled Ar	ea within a Wetl	land?	Yes X No	
_ _	X No	_						
vvetiana riyarology i resent:	X 110	_						
Remarks:								
Depressional palustrine scrub-shrub wetland	PSS-1 in area	a mapped by N	NWI as PEM	. PSS-1 a	buts PEM-1B.			
VEGETATION - Use scientific names of pla	nts.							
	Absolute	Dominant	Indicator		ance Test Work			
Tree Stratum (Plot size: 30x30 ft)	% Cover	Species?	Status		of Dominant Sp			
1					e OBL, FACW, (ing FAC-) :	OI FAC.	2	(A)
2								
3					umber of Domin		2	(D)
4				Species	s Across All Stra	ila.	2	(B)
5	0 =	Total Cover						
Conline (Chrub Stratum (Diet aim)		- Total Covel			of Dominant Sp		1000/	(4 /5)
	15 ft)	V	EA C\A/	That Ai	e OBL, FACW, o	or FAC.	100%	(A/B)
1. Salix exigua	55	<u> </u>	FACW	Brovolo	ence Index Wor	kahaati		
2				Fievale	Total % Cove		Multiply	hv:
4				OBL	species		x 1 = 0	
5				FACW	•		$\frac{x}{x} = \frac{0}{220}$	
<u> </u>	55 =	Total Cover		FAC	species		x 3 = 30	
Herb Stratum (Plot size: 5x5 ft)		Total Gover		FACU	•		$\frac{x}{x}$ 4 = 48	
1. Cirsium arvense	12	N	FACU	UPL	species		x 5 = 0	
2. Juncus balticus	45	Y	FACW	Column	•	132	(A) 298	
3. Calamagrostis stricta	10		FACW	Column		valence Index = B/A =		
4. Sonchus arvensis	10		FAC	Hydrop	hytic Vegetation			
5.				,	•	Test for Hydrophytic	Vegetation	
6.						ance Test is >50%.	9	
7.						ence Index is <3.01		
8.						ological Adaptations¹	(Provide sup-	
9.					porting da	ata in Remarks or on	a separate she	et)
0.					Problema	itic Hydrophytic Vege	tation (Explain))
	77 =	Total Cover						
Woody Vine Stratum (Plot size: 30x30	ft)							
1.					¹ Indicators of hw	dric soil and wetland h	vdrology must be	e
2.					•	disturbed or problemat		
	0	= Total Cove	er					
% Bare Ground in Herb Stratum 2	3 %				Hydrophytic Ve	getation Present?	X Yes	No
Remarks:				_1				

	Matrix			Redox	Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10 YR 2/1	100					Silty Clay		
4-16	10 YR 4/2	95	2.5 YR 4/6	5	С	M	Sand		
					_	·			
					_	<u> </u>			
						<u> </u>			
¹ Type: C=Ce	oncentration, D=Dep	oletion. RM	=Reduced Matri	x. CS=Cov	ered or Co	ated Sand Grains	² Location: PL=	Pore Lining, M=Matrix	
Hydric Soil				,				rs for Problematic Hydric Soil	ls ³ :
•	sol (A1)			San	dv Gleved	Matrix (S4)		cm Muck (A9) (LRR I, J)	
	Epipedon (A2)				dy Redox (oast Prairie Redox (A16) (LRR	F. G. H)
	Histic (A3)				oped Matrix	•		ark Surface (S7) (LRR G)	., .,
	ogen Sulfide (A4)				•	Mineral (F1)		igh Plains Depressions (F16)	
	fied Layers (A5) (LF	RR F)			•	Matrix (F2)	''	(LRR H outside of MLRA 72 &	e. 72\
	Muck (A9) (LRR F ,	•			leted Matri		P	educed Vertic (F18)	x 73)
	eted Below Dark Sui				lox Dark Su	` '		ed Parent Material (TF2)	
	Dark Surface (A12	` '				Surface (F7)		ther (Explain in Remarks)	
	y Mucky Mineral (S	,			lox Depress	` ,			
	m Mucky Peat or Pe	•	RRG H)			pressions (F16)		ors of hydrophylic vegetation hydrology must be present, u	
	in Maoky i cat of i c	Jul (02) (L I						d or problematic.	1111C33
	Mucky Peat or Pea	t (S3) (LRR	`F)	(P.	1LRA /2 & /:	SOTLKK H)			
5 cm	Mucky Peat or Pea		? F) 	(N	1LRA 72 & 7	3 OT LKK H)			
5 cm	Mucky Peat or Pea		R F)	(N	1LRA /2 & /3	S OT LRK H)			
5 cm Restrictive I Type:	Layer: (if observed)		R F) 	(N	1LKA 72 & 73	S OT LKK H)			
5 cm	Layer: (if observed)		R F) 	(N	1LRA 72 & 7	S OT LKK H)	Hydric Soi		No
5 cm Restrictive I Type: Depth (inc.)	Layer: (if observed)		R F) 	(N	1LRA 72 & 7	S OT LKK H)		I Present? Yes X	No
5 cm Restrictive I Type: Depth (inc.)	Layer: (if observed)			(N	11KA 72 & 7	S OT LKK H)		I Present? Yes X	No
5 cm Restrictive I Type: Depth (incompress) Remarks:	Layer: (if observed)		R F)	(N	11KA 72 & 7	S OT LKK H)		I Present? Yes X	No
5 cm Restrictive I Type: Depth (inc) Remarks:	Layer: (if observed)		R F)	(N	1LKA /2 & /:	S OT LKK H)		I Present? Yes X	No
Femarks: Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd	Layer: (if observed) ches):	:			11KA 72 & 7		Hydric Soi	I Present? Yes X	
Femarks: 5 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic	Layer: (if observed) shes): Y drology Indicators: cators (minimum of cators)	:		at apply)			Hydric Soi	rs (minimum of two required	
Frimary Indices	ches): GY drology Indicators: cators (minimum of other cators) acce Water (A1)	:		at apply) Salt Crus	t (B11)	S	Hydric Soi	rs (minimum of two required Surface Soil Cracks (B6)	d)
Femarks: HYDROLOG Wetland Hyd Surfa High	ches): drology Indicators: cators (minimum of once Water (A1) Water Table (A2)	:		<i>at apply)</i> Salt Crus Aquatic F	it (B11) Fauna (B13	s	Hydric Soi	rs <i>(minimum of two required</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave So	d)
Type: Depth (incomplete 1	cators (minimum of of cators (A1) Water Table (A2) ration (A3)	:		<i>at apply)</i> Salt Crus Aquatic F	it (B11) Fauna (B13)	S dor (C1)	Hydric Soi	rs (minimum of two required Surface Soil Cracks (B6)	d) urf. (B8)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	ches): GY drology Indicators: cators (minimum of other (A1)) Water Table (A2) ration (A3) or Marks (B1)	:		at apply) Salt Crus Aquatic F Hydroger Dry-Seas	t (B11) Fauna (B13 n Sulfide Oc	S dor (C1)	Hydric Soi	es (minimum of two required Surface Soil Cracks (B6) Sparsley Vegetated Concave So Drainage Patterns (B10)	d) urf. (B8) n Living
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	ches): drology Indicators: cators (minimum of of other Table (A2) ration (A3) or Marks (B1) ment Deposits (B2)	:		at apply) Salt Crus Aquatic F Hydroger Dry-Seas	it (B11) Fauna (B13 n Sulfide Oc son Water T	S dor (C1)	Hydric Soi	s (minimum of two required Surface Soil Cracks (B6) Sparsley Vegetated Concave So Drainage Patterns (B10) Oxidized Rhizospheres of Roots (C3) (where tilled)	d) urf. (B8) n Living
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift	ches): GY drology Indicators: cators (minimum of of other (A1)) Water Table (A2) cation (A3) or Marks (B1) ment Deposits (B2) Deposits (B3)	:		at apply) Salt Crus Aquatic F Hydroger Dry-Seas Oxidized F (where n	et (B11) Fauna (B13 In Sulfide Oc Ion Water T Rhizospheres Iot tilled)	S dor (C1) Table (C2) on Living Roots (C3)	Hydric Soi	Surface Soil Cracks (B6) Sparsley Vegetated Concave Soil Drainage Patterns (B10) Oxidized Rhizospheres or Roots (C3) (where tilled) Crayfish Burrows (C8)	d) urf. (B8) n Living
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal	ches): GY drology Indicators: cators (minimum of other (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	:		at apply) Salt Crus Aquatic F Hydroger Dry-Seas Oxidized F (where n	t (B11) Fauna (B13) In Sulfide Octoon Water Tachizospheres Tot tilled) In Sulfide Octoon Water Tachizospheres Tot tilled	S dor (C1) Table (C2) on Living Roots (C3)	Hydric Soi	Surface Soil Cracks (B6) Sparsley Vegetated Concave So Drainage Patterns (B10) Oxidized Rhizospheres of Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial In	d) urf. (B8) n Living
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I	ches): Carrier (if observed) Ches): Carrier (And Carri	: one is requi	ired; check all th	at apply) Salt Crus Aquatic F Hydroger Dry-Seas Oxidized F (where n Presence	et (B11) Fauna (B13) In Sulfide Octon Water Tehizospheres Tot tilled) In of Reduce the Surface (Solution (C1) Fable (C2) on Living Roots (C3) and Iron (C4) C7)	Hydric Soi	rs (minimum of two required Surface Soil Cracks (B6) Sparsley Vegetated Concave St Drainage Patterns (B10) Oxidized Rhizospheres of Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial In Geomorphic Position (D2	d) urf. (B8) n Living
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Wetland	Determi	nation Da	ata Forr	n - Grea	t Plains Regi	on		
Project/Site: I-25/I-80 Interchange		City	/County: Ch	neyenne/La	ramie	Sampling Da	ite: 8	/1/2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation	1			State: WY	Sampling Po	int:	S-27
Investigator(s): R. Newton, D. Soucy					Section,	Township, Range:	S11 T13N	R67W
Landform (hillslope, terrace, etc.): minor	terrace	Lo	cal Relief (d	concave, co	nvex, none):	none	Slope	(%): 0-2
Subregion (LRR): G - Western Great Pla	ains	Lat	. 222	666.3514	Long:	743969.4988	Datu	ım: WYE
Soil Map Unit Name: Merden silty clay loam	1, 0 to 3 perce	ent slopes			NV	VI Classification:	_ '	UPL
Are climatic/hydrologic conditions on the site	typical for this	s time of year?	? Ye	s X	No (If	no, explain in Ren	narks)	
Are Vegetation , Soil , or Hy	/drology	significantly	disturbed?	Are "Norma	I Circumstances"	present? Yes		X No
Are Vegetation , Soil , or Hy	/drology	naturally pro	blematic?		(If needed, exp	olain any answers i	n Remarks	 ;.)
SUMMARY OF FINDINGS - Attach site map				transects.				,
Hydrophytic Vegetation Present? Yes	No X				•	•		
Hydric Soil Present? Yes	No X	_	Is the S	amnled Are	a within a Wetlan	d2 V	′es l	No X
Wetland Hydrology Present? Yes	No X	_	13 110 0	ampica Arc	a within a vvettari	u: i		<u> </u>
Remarks:								
Paired upland for PSS-1.								
VEGETATION - Use scientific names of pla	ants.							
·	Absolute	Dominant	Indicator	Domina	nce Test Worksh	eet:		
Tree Stratum (Plot size: 30x30 ft)	% Cover	Species?	Status	Number	of Dominant Spec	cies		
1					OBL, FACW, or I	FAC:	0	(A)
2				(excludir	ng FAC-):			
3					mber of Dominan			
4				Species	Across All Strata:		1	(B)
5								
Sapling/Shrub Stratum (Plot size: 15x	0 = 15 ft)	= Total Cover			of Dominant Spec OBL, FACW, or I		0%	(A/B)
2.				Prevaler	nce Index Works	heet:		
3.					Total % Cover o	of:	Multi	ply by:
4.				OBL	species	0	x 1 =	0
5.				FACW	species	12	x 2 =	24
	0 =	= Total Cover		FAC	species	15	x 3 =	45
Herb Stratum (Plot size: 5x5 ft)				FACU	species	65	x 4 =	260
1. Cirsium arvense	60	Υ	FACU	UPL	species	8 >	· 5 =	40
2. Gaura parviflora	3	N	NI	Column	Totals:	100	(A)	369 (B)
3. Chenopodium album	5	N	FACU		Prevale	ence Index = B/A =	3.7	7
4. Sonchus arvensis	15	N	FAC	Hydroph	ytic Vegetation	Indicators:		
5. Euphorbia esula	5	N	NI		1. Rapid Tes	st for Hydrophytic \	/egetation	
6. Juncus balticus	12	N	FACW	-	2. Dominano	ce Test is >50%.		
7.				-	3. Prevalend	ce Index is <3.01		
8.				-	4. Morpholo	gical Adaptations¹	(Provide sι	ıb-
9.				-	porting data	in Remarks or on	a separate	sheet)
0.				_	Problematic	Hydrophytic Vege	tation (Exp	lain)
	100 =	Total Cover						
Woody Vine Stratum (Plot size: 30x30	ft)							
1					¹ Indicators of hydri	c soil and wetland h	ydrology mu	ıst be
2					present, unless dist	turbed or problemat	ic.	
	0	= Total Cove	er					
% Bare Ground in Herb Stratum	0 %				Hydrophytic Veget	ation Present?	Ye	es X No
Remarks:				•				
Species with no indicator (NI) are treated as	UPL for this a	nalysis.						

(inches) Color (moist) % 0-4 10 YR 2/1 100 4-18 10 YR 4/2 100 10 YR 4/2 100 11 YR 4/2 100 11 YR 4/2 100 12 YR 4/2 100 13 YR 4/2 100 14 YR 4/2 100 15 YR 4/2 100 16 YR 4/2 17 YR 4/2 17 YR 4/2 100 17 YR 4/2 100 17 YR 4/2 100 10 YR 4/2 100 10 YR 4/2 10 YR 4/2 10 YR 4/2 100 10 YR 4/2 100 10 YR 4/2 10	- - - - - - -	Sandy Gleye Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma	Coated Sand Grains. d Matrix (S4) c (S5) rix (S6) y Mineral (F1) ed Matrix (F2) trix (F3) Surface (F6) rk Surface (F7)	Indicators for 1 cm Coast Dark S High F (LRI Reduce Red P	or Problematic Hydric Soils ³ : Muck (A9) (LRR I, J) Prairie Redox (A16) (LRR F, G, H) Surface (S7) (LRR G) Plains Depressions (F16) R H outside of MLRA 72 & 73) ced Vertic (F18)
4-18 10 YR 4/2 100 1 Type: C=Concentration, D=Depletion, RM=R Hydric Soil Indicators Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	- - - - - - -	Sandy Gleye Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark Depleted Da	d Matrix (S4) c (S5) rix (S6) y Mineral (F1) ed Matrix (F2) trix (F3) Surface (F6) rk Surface (F7)	Sand 2Location: PL=Pore Indicators fo Coast Dark S High F (LRI Reduc	or Problematic Hydric Soils ³ : Muck (A9) (LRR I, J) Prairie Redox (A16) (LRR F, G, H) Surface (S7) (LRR G) Plains Depressions (F16) R H outside of MLRA 72 & 73) ced Vertic (F18)
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Hydric Soil Indicators Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR F) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	- - - - - - -	Sandy Gleye Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark Depleted Da	d Matrix (S4) c (S5) rix (S6) y Mineral (F1) ed Matrix (F2) trix (F3) Surface (F6) rk Surface (F7)	Indicators for 1 cm Coast Dark S High F (LRI Reduce Red P	or Problematic Hydric Soils ³ : Muck (A9) (LRR I, J) Prairie Redox (A16) (LRR F, G, H) Surface (S7) (LRR G) Plains Depressions (F16) R H outside of MLRA 72 & 73) ced Vertic (F18)
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	- - - - - -	Sandy Redox Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark Depleted Da	c (S5) rix (S6) y Mineral (F1) ed Matrix (F2) trix (F3) Surface (F6) ek Surface (F7)	Coast Dark S High F (LRI Reduc	Prairie Redox (A16) (LRR F, G, H) Surface (S7) (LRR G) Plains Depressions (F16) R H outside of MLRA 72 & 73) ced Vertic (F18)
Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	- - - - - -	Stripped Mat Loamy Muck Loamy Gleye Depleted Ma Redox Dark Depleted Da	rix (S6) y Mineral (F1) ed Matrix (F2) trix (F3) Surface (F6) ek Surface (F7)	Dark S High F (LRI Reduc	Surface (S7) (LRR G) Plains Depressions (F16) R H outside of MLRA 72 & 73) ced Vertic (F18)
Hydrogen Sulfide (A4) Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	- - - - -	Loamy Muck Loamy Gleye Depleted Ma Redox Dark Depleted Da	y Mineral (F1) ed Matrix (F2) trix (F3) Surface (F6) ek Surface (F7)	High F (LRI Reduc	Plains Depressions (F16) R H outside of MLRA 72 & 73) ced Vertic (F18)
Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	- - - -	Loamy Gleye Depleted Ma Redox Dark Depleted Da	ed Matrix (F2) trix (F3) Surface (F6) rk Surface (F7)	(LRI Reduc	R H outside of MLRA 72 & 73) ced Vertic (F18)
Stratified Layers (A5) (LRR F) 1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	- - - -	Loamy Gleye Depleted Ma Redox Dark Depleted Da	ed Matrix (F2) trix (F3) Surface (F6) rk Surface (F7)	Reduc Red P	ced Vertic (F18)
1 cm Muck (A9) (LRR F, G, H) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	- - -	Depleted Ma Redox Dark Depleted Da	trix (F3) Surface (F6) rk Surface (F7)	Reduc Red P	ced Vertic (F18)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	- - -	Depleted Da	rk Surface (F7)	Red P	
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	- -	Depleted Da	rk Surface (F7)		arent Material (TF2)
2.5 cm Mucky Peat or Peat (S2) (LRR 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B		Redox Depre	·i (FO)		(Explain in Remarks)
2.5 cm Mucky Peat or Peat (S2) (LRR 5 cm Mucky Peat or Peat (S3) (LRR F) Restrictive Layer: (if observed) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	2 LI)		essions (F8)	³ Indicators o	of hydrophylic vegetation and
Restrictive Layer: (if observed) Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	э, п <i>)</i>	High Plains [Depressions (F16)		rology must be present, unless
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B		(MLRA 72 8	73 of LRR H)	disturbed or	problematic.
Type: Depth (inches): Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B				1	
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HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B				•	
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Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B					
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High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B		alt Crust (B11)		•	ninimum of two required) Irface Soil Cracks (B6)
Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B		quatic Fauna (B	13)		arsley Vegetated Concave Surf. (B8)
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B			,		
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B		ydrogen Sulfide			ainage Patterns (B10) kidized Rhizospheres on Living
Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B		ry-Season Wate	es on Living Roots (C3)	—— Ro	oots (C3) (where tilled)
Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B		· ·	J ,	•	ayfish Burrows (C8)
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B	•	where not tilled)			, ,
Inundation Visible on Aerial Imagery (B		resence of Redu	,		turation Visible on Aerial Imagery (C9)
		hin Muck Surfac			eomorphic Position (D2)
	') <u> </u>	ther (Explain in I	Remarks)		AC-Neutral Test (D5)
Water Starred Edayes (Bb)				FIC	ost-Heave Hummocks (D7) (LRR F)
Field Observations:					
Surface Water Present?		No X	Depth (inches)		Wetland Hydrology
Water Table Present?	Yes	No X	Depth (inches)		Present?
Saturation Present? (includes capillary fringe)	Yes _ Yes _	No X	Depth (inches)		YesX_No

3. Alopecurus pratensis 4. Juncus balticus 4. Juncus balticus 4. Juncus balticus 4. Juncus balticus 5. Schoenoplectus pungens 6. Glycyrrhiza lepidota 7. Hordeum jubatum 8. N FACW 8.	Wetland D	etermina)	tion Da	ata Form	ı - Gre	at Plains R	egion		
Investigator(s): R. Newton, D. Soucy	Project/Site: I-25/I-80 Interchange		City/	County: Che	yenne/L	aramie	Sampling D)ate: 8/1 /	2019
Landform (hillstope, ferrace, etc.): depression/finge Local Relief (concave, convex, none): concave; Slope (%): 0.2 Subregion (LRR): G. Western Great Plains Lat. 223474.8939 Long: 744171.8563 Datum; WYE Solid Map Unit Name: Evansion loams, 10 is piercent slopes New York Are climatichydrologic conditions on the site typical for this time of year? Yes. X. No. (th.no., explain in Remarks) Are Vegetation Soli or Hydrology naturally problematic? (th.needde, explain any answers in Remarks) Are Vegetation Soli or Hydrology naturally problematic? (th.needde, explain any answers in Remarks) Are Vegetation Soli or Hydrology naturally problematic? (th.needde, explain any answers in Remarks) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrologitic Vegetation Present? Yes. X. No Is the Sampled Area within a Wetland? Yes. X. No Wetland Hydrology Present? Yes. X. No Is the Sampled Area within a Wetland? Yes. X. No Wetland Hydrology Present? Yes. X. No Is the Sampled Area within a Wetland? Yes. X. No Wetland Hydrology Present? Yes. X. No Is the Sampled Area within a Wetland? Yes. X. No Wetland Hydrology Present? Yes. X. No Is the Sampled Area within a Wetland? Yes. X. No Wetland Hydrology Present? Yes. X. No Is the Sampled Area within a Wetland? Yes. X. No Wetland Hydrology Present? Yes. X. No Is the Sampled Area within a Wetland? Yes. X. No Wetland Hydrology Present? Yes. X. No Is the Sampled Area within a Wetland? Yes. X. No Wetland Hydrology Present? Yes. X. No Is the Sampled Area within a Wetland? Yes. X. No Wetland Hydrology Present? Yes. X. No Is the Sampled Area within a Wetland? Yes. X. No Wetland Hydrology Present? Yes. X. No Is the Sampled Area within a Wetland? Yes. X. No Wetland Hydrology Present? Yes.	Applicant/Owner: Wyoming Dept. of Tran	sportation				State: V	VY Sampling P	oint: S	-28
Subregion (LRR):	Investigator(s): R. Newton, D. Soucy					Sect	ion, Township, Rang	e: S12 T13N R	167W
Soli Map Unit Name Evanston loam, 0 to 6 percent slopes	Landform (hillslope, terrace, etc.): depressi	on/fringe	Lo	cal Relief <i>(cc</i>	ncave, c	onvex, none):	concave	Slope (%	b): <u>0-2</u>
Are Vegetation	Subregion (LRR): G - Western Great Plain	IS	Lat.	2234	74.8939	Long	: 744171.6553	Datum:	WYE
Are Vegetation	Soil Map Unit Name: Evanston loam, 0 to 6 p	ercent slopes					NWI Classification:	PEMA/I	PEMC
Are Vegetation Soil	Are climatic/hydrologic conditions on the site ty	pical for this tin	me of year?	Yes	X	No	(If no, explain in Re	marks)	
Summary OF FINDINGS - Attact Stee map showing sampling point locations, transects, important features, etc.	Are Vegetation , Soil , or Hydr	rology s	ignificantly	disturbed? A	re "Norm	al Circumstand	ces" present? Yes	X	No
Summary OF FINDINGS - Attact Stee map showing sampling point locations, transects, important features, etc.	Are Vegetation , Soil , or Hydr	rology n	aturally pro	blematic?		(If needed,	explain any answers	in Remarks.)	<u> </u>
Hydrophytic Vegetation Present? Yes X No	SUMMARY OF FINDINGS - Attach site map s	howing samp	ling point	locations, tr	ansects,	important fea	atures, etc.		
Hydric Soil Present? Yes X No No No No No No No							·		
NWI-mapped depressional/fringe palustrine emergent wetland PEM-9 surrounding OW-3. VEGETATION - Use scientific names of plants. Dominant Indicator Species Status Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)				Is the Sa	mpled Ar	ea within a We	tland?	Yes X No.	,
New Remarks New Remarks New Remarks New Remarks New Remarks New Ne	<u> </u>							<u> </u>	
NWI-mapped depressional/fringe palustrine emergent wetland PEM-9 surrounding OW-3. VEGETATION - Use scientific names of plants. Absolute Dominant Indicator Species Status Number of Dominant Species Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	wedand riydrology i resent:								
Dominance Test Worksheet: Number of Dominant Species Number of Domin	Remarks:								
Tree Stratum (Plot size: 30x30 ft)	NWI-mapped depressional/fringe palustrine em	ergent wetland	d PEM-9 su	rrounding O\	N-3.				
Number of Dominant Species That Are OBL, FACW, or FAC; 2	VEGETATION - Use scientific names of plant	ts.							
1.	Trac Stratum (Diet size: 20v20 ft)								
Control Cont	Tree Stratum (Plot size: 30x30 ft)	% Cover	Species?	Status			•	2	(4)
Total Number of Dominant Species Across All Strata: 2	1						OITAO.		(A)
4.	2								
Sapling/Shrub Stratum (Plot size: 15x15 ft)	· ·							2	(B)
Sapling/Shrub Stratum (Plot size: 15x15 ft)	" 				Ороско	ACIOSS All Oli	ata.		
Sapling/Shrub Stratum (Plot size: 15x15 ft) That Are OBL, FACW, or FAC: 100% (A/B) 1. 1. Prevalence Index Worksheet: Total % Cover of: Multiply by: 3. 0 = Total Cover FACW species 18 x 1 = 18 FACW species 73 x 2 = 146 5. 0 = Total Cover FACW species 9 x 4 = 36 FACW species 9 x 4 = 36 1. Cirsium arvense 4 N FACU 2. Triglochin maritime 3 N OBL 3 FACW Species 9 x 4 = 36 FACW species 9 x 4 = 36 2. Triglochin maritime 3 N OBL 3 FACW Species 9 x 4 = 36 3. Alopecurus pratensis 25 Y FACW 4. Juncus balticus 40 Y FACW 5. Schoenoplectus pungens 15 N OBL 6. Glycyrhiza lepidota 5 N FACW 7. Hordeum jubatum 8 N FACW 8. N FACW 8. Schoenoplectus pungens 9. Schoenoplectus pungens 15 N FACW 8. Schoenoplectus pungens 15 N FACW 8. Schoenoplectus pungens 9. Schoenoplectus pungens 15 N FACW 9. Schoenoplectus pungens 15 N FACW 9. Schoenoplectus pungens 15 N FACW 1. Rapid Test for Hydrophytic Vegetation Indicators: Schoenoplectus pungens 15 N FACW 1. Rapid Test for Hydrophytic Vegetation (Explain) 9. Schoenoplectus pungens 15 N FACW 1. Rapid Test for Hydrophytic Vegetation (Explain) 9. Schoenoplectus pungens 15 N FACW 1. Rapid Test for Hydrophytic Vegetation (Explain) 9. Schoenoplectus pungens 15 N FACW 1. Rapid Test for Hydrophytic Vegetation (Explain) 9. Schoenoplectus pungens 15 N FACW 1. Rapid Test for Hydrophytic Vegetation (Explain) 9. Schoenoplectus pungens 15 N FACW 1. Rapid Test for Hydrophytic Vegetation (Explain) 9. Schoenoplectus pungens 15 N FACW 1. Rapid Test for Hydrophytic Vegetation (Explain) 9. Schoenoplectus pungens 15 N FACW 1. Rapid Test for Hydrophytic Vegeta	·		otal Cover		L.				
1. 2. 3. 4. 5. 6. 1. 6.	Sanling/Shruh Stratum (Plot size: 15v15		otal Govol				•	100%	(A/D)
Total % Cover of: Multiply by:	1				Triat 7 ti	0 OBL, 17(011,	01170.	10070	(^/,b)
Total % Cover of: Multiply by:	··				Prevale	ence Index Wo	orksheet:		
4.	3.				1			Multiply	v bv:
FACW species FAC	4.				OBL				
Herb Stratum (Plot size: 5x5 ft)						•	73		46
Herb Stratum (Plot size: 5x5 ft) FACU FACU species 9 x 4 = 36 36 1 Cirsium arvense 4 N FACU FACU Species 9 x 4 = 36 9 x 4 x 4	· -	0 = To	otal Cover						0
1. Cirsium arvense 4 N FACU 2. Triglochin maritima 3 N OBL 3. Alopecurus pratensis 25 Y FACW 4. Juncus balticus 40 Y FACW 5. Schoenoplectus pungens 15 N OBL 6. Glycyrrhiza lepidota 5 N FACW 7. Hordeum jubatum 8 N FACW 9. OBL 100 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1	Herb Stratum (Plot size: 5x5 ft)					•	9		36
3. Alopecurus pratensis 4. Juncus balticus 5. Schoenoplectus pungens 6. Glycyrrhiza lepidota 7. Hordeum jubatum 8. 9. 00. 00. 00. 00. 00. 00. 00. 00. 00.		4	N	FACU		species	0	x 5 =	0
3. Alopecurus pratensis 4. Juncus balticus 5. Schoenoplectus pungens 6. Glycyrrhiza lepidota 7. Hordeum jubatum 8. 9. 9. 100 = Total Cover Woody Vine Stratum (Plot size: 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2. Triglochin maritima	3	N	OBL	Column	Totals:	100	(A) 2	(B)
5. Schoenoplectus pungens 15 N OBL 6. Glycyrrhiza lepidota 7. Hordeum jubatum 8 N FACU 8. USAN SET STATEM (Plot size: 30x30 ft) 1. USAN STATEM (Plot size: 30x30 ft) 1. USAN SCHOENOPLE STRATUM (Plot size: 30x30 ft) 1. USAN SCHOENOPLE STATEM (Plot size: 30x30 ft) 1. USAN SCHOENO	3. Alopecurus pratensis	25	Υ	FACW		Pre	evalence Index = B/A		
6. Glycyrrhiza lepidota 7. Hordeum jubatum 8 N FACU X 2. Dominance Test is >50%. X 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 100 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1.	4. Juncus balticus	40	Υ	FACW	Hydrop	hytic Vegetati	ion Indicators:		
7. Hordeum jubatum 8. N FACW 8. 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 9. Problematic Hydrophytic Vegetation (Explain) 100 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	5. Schoenoplectus pungens	15	N	OBL		X 1. Rapid	Test for Hydrophytic	Vegetation	
8. 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 9. Problematic Hydrophytic Vegetation (Explain) Woody Vine Stratum (Plot size: 30x30 ft) 1. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	6. Glycyrrhiza lepidota	5	N	FACU		X 2. Domir	nance Test is >50%.		
9.	7. Hordeum jubatum	8	N	FACW		X 3. Preva	lence Index is <3.01		
Problematic Hydrophytic Vegetation (Explain) 100	8.						•		
100 Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1. 1. 1. 1. 1. 1. 2. 2.	9.					porting o	data in Remarks or o	າ a separate sh	ieet)
Woody Vine Stratum (Plot size: 30x30 ft) 1.	0.					Problem	atic Hydrophytic Veg	etation (Explair	n)
1		100 = To	otal Cover						
2. present, unless disturbed or problematic. 0 = Total Cover	Woody Vine Stratum (Plot size: 30x30 ft)							
0 = Total Cover	1					¹ Indicators of h	nydric soil and wetland	hydrology must	be
	2.					present, unless	disturbed or problema	atic.	
% Bare Ground in Herb Stratum 0 % Hydrophytic Vegetation Present? X Yes No		0 =	Total Cove	er					
No Bard Ground in Field Gradum 20 70 Invarious regentation Fresence 27 Tes 160	% Bare Ground in Herb Stratum 0	%				Hydrophytic V	egetation Present?	X Yes	No
								_	
Remarks:	Remarks:				-				

SOIL

S-28

Sampling Point:

	Matrix			Redox F	eatures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-3	10 YR 3/2	100					Silty Clay	dense fine roots	
3-16	10 YR 3/2	97	7.5 YR 4/6	3	С	PL	Sand		
								-	
							-		
								-	
¹ Type: C=C	oncentration, D=Dep	olotion DM	I=Poduced Metrix		rad or Cod	atod Sand Crains	² Location: DI	=Pore Lining, M=Matrix	
		Dietion, Riv	-Reduced Matrix,	CS=Cove	red or Coa	aleu Sanu Grains.			
Hydric Soil							Indica	tors for Problematic Hydric Soils ³ :	
	sol (A1)		_			Matrix (S4)	<u></u>	1 cm Muck (A9) (LRR I, J)	
	Epipedon (A2)		_		y Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)	
	(Histic (A3)		_		ed Matrix	` ,		Dark Surface (S7) (LRR G)	
	ogen Sulfide (A4)	·	_			Mineral (F1)		High Plains Depressions (F16)	
	fied Layers (A5) (LF	-	_		-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)	
	Muck (A9) (LRR F,		_		eted Matrix			Reduced Vertic (F18)	
	eted Below Dark Sui	` '	_		x Dark Sui			Red Parent Material (TF2)	
	Dark Surface (A12)	,	_			Surface (F7)		Other (Explain in Remarks)	
	y Mucky Mineral (S			x Depress	` '	³ Indicators of hydrophylic vegetation and			
	m Mucky Peat or Pe				pressions (F16)	wetland hydrology must be present, unless disturbed or problematic.			
5 cm	Mucky Peat or Pea	t (S3) (LRF	R F)	(ML	RA 72 & 73	of LRR H)	distail	oca or problematic.	
Restrictive I	Layer: (if observed)								
Restrictive I	Layer: (if observed)								
							Hydric S	oil Present? Yes X No	
Туре:							Hydric S	oil Present? Yes X No	
Type: Depth <i>(inc</i>							Hydric S	oil Present? Yes X No	
Type: Depth <i>(inc</i>							Hydric S	oil Present? Yes X No	
Type: Depth <i>(inc</i>	shes):						Hydric S	oil Present? Yes X No	
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd	erhes): GY drology Indicators:						Hydric S	oil Present? Yes X No	
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic	ery drology Indicators:					s		ors (minimum of two required)	
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	ches): drology Indicators: cators (minimum of o			Salt Crust	` '			ors (minimum of two required) Surface Soil Cracks (B6)	
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	ches): drology Indicators: cators (minimum of once Water (A1) Water Table (A2)			Salt Crust Aquatic Fa	una (B13)			ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)	
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	ches): drology Indicators: cators (minimum of concervators (A1) Water Table (A2) ration (A3)			Salt Crust Aquatic Fa Hydrogen S	una (B13) Sulfide Od	or (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)	
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	drology Indicators: cators (minimum of other Water (A1) Water Table (A2) ration (A3) or Marks (B1)			Salt Crust Aquatic Fa Hydrogen S	una (B13)	or (C1)		cors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living	
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	ches): drology Indicators: cators (minimum of of other (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2)			Salt Crust Aquatic Fa Hydrogen S Dry-Seaso	una (B13) Sulfide Od n Water Ta	or (C1)	econdary Indicat	cors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)	
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	drology Indicators: cators (minimum of other Water (A1) Water Table (A2) ration (A3) or Marks (B1)			Salt Crust Aquatic Fa Hydrogen Ory-Seaso Oxidized Rh where no	una (B13) Sulfide Od n Water Ta izospheres t tilled)	or (C1) able (C2) on Living Roots (C3)	econdary Indicat	Sors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)	
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	ches): drology Indicators: cators (minimum of of other (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)			Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Oxidized Rh where no	una (B13) Sulfide Od n Water Ti izospheres t tilled)	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicat	Surface Soil Cracks (B6) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)	
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron [ches): drology Indicators: cators (minimum of of other cators) are Water (A1) Water Table (A2) ration (A3) are Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	: one is requ		Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Dxidized Rh where no Presence of	una (B13) Sulfide Od n Water Taizospheres t tilled) of Reduced Surface (0	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicat	Sors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)	
Type: Depth (incomplete incomplete incomplet	drology Indicators: cators (minimum of of other cators (Minimum of othe	one is requ		Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Dxidized Rh where no Presence of	una (B13) Sulfide Od n Water Ti izospheres t tilled)	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Secondary Indicat	Surface Soil Cracks (B6) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)	
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	ches): drology Indicators: cators (minimum of of other cators) are Water (A1) Water Table (A2) ration (A3) are Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	one is requ		Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Dxidized Rh where no Presence of	una (B13) Sulfide Od n Water Taizospheres t tilled) of Reduced Surface (0	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Secondary Indicat	cors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)	
Type: Depth (incomplete incomplete incomplet	ches): drology Indicators: cators (minimum of of other cators) are Water (A1) Water Table (A2) ration (A3) are Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aerer-Stained Leaves (E	one is requ		Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Dxidized Rh where no Presence of	una (B13) Sulfide Od n Water Taizospheres t tilled) of Reduced Surface (0	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Secondary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)	
Type: Depth (incomplete in the content of the conte	ches): drology Indicators: cators (minimum of of other (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer or-Stained Leaves (E	one is requ		Salt Crust Aquatic Fa Hydrogen Ory-Seaso Oxidized Rh where no Presence of Thin Muck Other (Exp	una (B13) Sulfide Od n Water Taizospheres t tilled) of Reduced Surface (Calain in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Secondary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)	
Type: Depth (incomplete incomplete incomplet	ches): drology Indicators: cators (minimum of of other cators (Minimum	one is requ		Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Dxidized Rh where no Presence of Thin Muck Other (Exp	una (B13) Sulfide Od n Water Ti izospheres t tilled) of Reduced Surface (Colorin Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Secondary Indicat	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) (Geomorphic Position (D2) (FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)	
Type: Depth (incomplete incomplete incomplet	ches): drology Indicators: cators (minimum of of other cators (Minimum	ione is requiral Imager	y (B7) Yes Yes	Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Dxidized Rh Where no Presence of Thin Muck Dther (Exp	una (B13) Sulfide Od n Water Ti izospheres t tilled) of Reducee Surface (Colain in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	Secondary Indicat	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) (Geomorphic Position (D2) (FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)	

Wetland	Determir	nation Da	ata Forr	n - Grea	at Plains Regio	on		
Project/Site: I-25/I-80 Interchange		City	/County: Ch	eyenne/La	aramie	Sampling Da	ate:	8/1/2019
Applicant/Owner: Wyoming Dept. of Tra	ansportation				State: WY	Sampling Po	oint:	S-29
Investigator(s): R. Newton, D. Soucy					Section,	Township, Range	e: S12 T13	3N R67W
Landform (hillslope, terrace, etc.): minor t	errace	Lo	cal Relief <i>(c</i>	oncave, co	onvex, none): ı	none	Slop	oe (%): 0
Subregion (LRR): G - Western Great Pla	ins	Lat	. 2240	003.0706	Long:	744608.4763	Da	tum: WYE
Soil Map Unit Name: Evanston loam, 0 to 6	percent slope	s			NV	VI Classification:		UPL
Are climatic/hydrologic conditions on the site t	ypical for this	time of year'	? Ye	s X	No (If i	no, explain in Rei	marks)	
Are Vegetation , Soil , or Hyd	drology	significantly	disturbed?	Are "Norm	al Circumstances"	present? Yes		X No
Are Vegetation , Soil , or Hy		naturally pro	oblematic?		(If needed, exp	lain any answers	in Remari	<u></u> ks.)
SUMMARY OF FINDINGS - Attach site map		-		ransects.				,
Hydrophytic Vegetation Present? Yes	No X		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			,		
Hydric Soil Present? Yes	No X	-	le the S	ampled Ar	ea within a Wetland	13	Yes	No X
^		-	15 1116 36	ampieu An	ea williili a vvellalil	1:	165	NO X
Wetland Hydrology Present? Yes	No X	_						
Paired upland point for PEM-9.								
VEGETATION - Use scientific names of pla				Domina	ınce Test Worksho			
Tree Stratum (Plot size: 30x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status		of Dominant Spec			
1	70 0 010.	орос.ос.	o tatao		e OBL, FACW, or F		1	1 (A)
2.					ng FAC-):			
3.				Total Nu	umber of Dominant			
4.					Across All Strata:		2	2 (B)
5.				-				
	0 =	Total Cover		Daraant	of Dominant Chasi	iaa		
Sapling/Shrub Stratum (Plot size: 15x1	15 ft)				of Dominant Speci e OBL, FACW, or F		50)% (A/B)
1.					- , - ,			
2.				Prevale	nce Index Worksh	neet:		
3.					Total % Cover o	f:	Mul	Itiply by:
4.				OBL	species	0	x 1 =	0
5.				FACW	species	10	x 2 =	20
	0 =	Total Cover		FAC	species	24	x 3 =	72
Herb Stratum (Plot size: 5x5 ft)				FACU	species	66	x 4 =	264
1. Glycyrrhiza lepidota	8	N	FACU	UPL	species	0	x 5 =	0
2. Plantago major	24	Y	FAC	Column	Totals:	100	(A)	356 (B)
3. Cirsium arvense	8	N	FACU			nce Index = B/A		3.6
4. Elymus repens	50	Y	FACU	Hydrop	hytic Vegetation I	ndicators:		
5. Juncus balticus	10	N	FACW		1. Rapid Tes	t for Hydrophytic	Vegetatio	'n
6.						e Test is >50%.	J	
7.					3. Prevalence	e Index is <3.01		
8.						jical Adaptations¹	(Provide	sup-
9.					porting data	in Remarks or on	a separat	te sheet)
10.					Problematic	Hydrophytic Vege	etation (Ex	κplain)
	100 =	Total Cover					•	. ,
Woody Vine Stratum (Plot size: 30x30	ft)							
1.					¹ Indicators of hydric	soil and wetland h	ovdrology r	must ha
2.					present, unless disti			nust be
	0	= Total Cov	er		, ,			
— — — — — — — — — — — — — — — — — — —		23.			Hydrophytic Vegeta	ation Present?		Yes X No
	·				, , , , , , , , , , , , , , , , , , , ,			
Remarks:				l				

Profile Desc	ription: (Describe to	the depth ne	eeded to docume	nt the indi	cator or o	confirm the absent	ce of indicators.)	
Depth	Matrix		1	Redox Fea	tures			
(inches)	Color (moist)	% (Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10 YR 3/2	100					Clay	
2-18	10 YR 3/2	100					Sand	
¹ Type: C=Co	ncentration, D=Dep	letion, RM=R	educed Matrix, C	S=Covere	d or Coa	ted Sand Grains.	² Location: PL=I	Pore Lining, M=Matrix
Hydric Soil I	ndicators						Indicato	rs for Problematic Hydric Soils ³ :
_	sol (A1)			Sandy (Gleved M	latrix (S4)		cm Muck (A9) (LRR I, J)
	Epipedon (A2)			_	Redox (S			oast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)			– ′	d Matrix	,		ark Surface (S7) (LRR G)
	gen Sulfide (A4)			_		lineral (F1)		igh Plains Depressions (F16)
	ied Layers (A5) (LR	RF)		_	-	//atrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F , (_		d Matrix	` '	R	educed Vertic (F18)
	ted Below Dark Surl			_		face (F6)		ed Parent Material (TF2)
	Thick Dark Surface (A12)					Surface (F7)		ther (Explain in Remarks)
Sandy Mucky Mineral (S1)				_	Depressi			
	n Mucky Peat or Pe	G. H)	_	•	ressions (F16)		ors of hydrophylic vegetation and hydrology must be present, unless	
	Mucky Peat or Peat			_		of LRR H)		d or problematic.
	-					,	I	
	.ayer: (if observed)							
Type:	, ,							
Depth (incl	nes):						Hydric Soi	I Present? Yes No X
Remarks:								
HYDROLOG	v							
	Irology Indicators:							
_	ators <i>(minimum of o</i>	ne is require	d: check all that a	npply)		Se	econdary Indicator	s (minimum of two required)
·	ce Water (A1)			lt Crust (B	11)		· · · · · · · · · · · · · · · · ·	Surface Soil Cracks (B6)
	Water Table (A2)			uatic Faun	•		-	Sparsley Vegetated Concave Surf. (B8)
	ation (A3)			drogen Su		or (C1)	-	Drainage Patterns (B10)
	Marks (B1)			v-Season \			-	Oxidized Rhizospheres on Living
	nent Deposits (B2)			•		on Living Roots (C3)	-	Roots (C3) (where tilled)
	Deposits (B3)			here not t	•	in Living Roots (00)		Crayfish Burrows (C8)
	Mat or Crust (B4)		•	esence of	•	Uron (C4)	-	 Saturation Visible on Aerial Imagery (C9)
— ·	Deposits (B5)			in Muck Si		` '		Geomorphic Position (D2)
	ation Visible on Aeri	al Imagery (F		her (Explai	`	,	-	FAC-Neutral Test (D5)
	r-Stained Leaves (B	0 , (TIOI (EXPIGI		idikoj		Frost-Heave Hummocks (D7) (LRR F)
								-
Field Observ								
Surface Water	er Present?		Yes			Depth <i>(inches)</i>		Wetland Hydrology
Water Table			Yes			Depth (inches)		Present?
Saturation Pr	esent? (includes cap	pillary fringe)	Yes	No	X	Depth (inches)		Yes <u>X</u> No
Remarks:								

Wetland Determin	nation Da	ata Form	ı - Gre	at Plains Re	gion		
Project/Site: I-25/I-80 Interchange	City/	County: Che	yenne/L	aramie	Sampling Da	ate: 8/1/20 1	19
Applicant/Owner: Wyoming Dept. of Transportation				State: W	Y Sampling Po	int: S-30	
Investigator(s): R. Newton, D. Soucy				Section	on, Township, Range	S12 T13N R67	W
Landform (hillslope, terrace, etc.): pond	Loc	cal Relief (co	ncave, c	onvex, none):	concave	Slope (%):	0-3
Subregion (LRR): G - Western Great Plains	Lat.	2245	03.6949	Long:	746591.6428	Datum: W	/Y E
Soil Map Unit Name: Evanston loam, 0 to 6 percent slope	es				NWI Classification:	PEMA/PEN	MC
Are climatic/hydrologic conditions on the site typical for this	time of year?	Yes	X	No	(If no, explain in Ren	narks)	
Are Vegetation, Soil, or Hydrology	significantly	disturbed? A	re "Norm	al Circumstanc	es" present? Yes	_X_ N	No
Are Vegetation , Soil , or Hydrology	naturally pro	blematic?		(If needed,	explain any answers i	in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showing sar	– mpling point∃	locations, tr	ansects,	important feat	tures, etc.		
Hydrophytic Vegetation Present? Yes X No							
Hydric Soil Present? Yes No	_	Is the Sa	mpled Ar	ea within a Wet	land?	res No X	X
Wetland Hydrology Present? Yes X No	_						_
Remarks:	_						
NUID manned stock pand OW 2. Area also manned by NIW	U oo DEM						
NHD-mapped stock pond OW-3. Area also mapped by NW VEGETATION - Use scientific names of plants.	i as PEM.						
Absolute	Dominant	Indicator	Domina	nce Test Work	sheet:		
Tree Stratum (Plot size: 30x30 ft) % Cover	Species?	Status	Number	of Dominant S	pecies		
1.				e OBL, FACW,	or FAC:	1	(A)
2.			(excludi	ing FAC-):			•
3.			Total N	umber of Domin	ant		
4.			Species	Across All Stra	ata:	1	(B)
5.							
Sapling/Shrub Stratum (Plot size: 15x15 ft) 1.	Total Cover			of Dominant Spe OBL, FACW,		100%	(A/B)
2.			Prevale	nce Index Wo	rksheet:		
3.				Total % Cove	er of:	Multiply by	y:
4.			OBL	species	3	x 1 = 3	
5			FACW	species	0	x 2 = 0	
	: Total Cover		FAC	species	0	x 3 = 0	
Herb Stratum (Plot size: 5x5 ft)			FACU	species	0	x 4 = 0	
1. Eleocharis palustris 3	<u> </u>	OBL	UPL	species	0 :	<u>x</u> 5 = <u>0</u>	
2			Column		3	(A) 3	(B)
3					/alence Index = B/A =	= 1.0	
4			Hydrop	hytic Vegetation			
5					Test for Hydrophytic	√egetation	
6					ance Test is >50%.		
7					ence Index is <3.01 ological Adaptations1	(Provide our	
8				•	ata in Remarks or on		et)
9							-,
0	Total Cover			Problema	atic Hydrophytic Vege	tation (Explain)	
Woody Vine Stratum (Plot size: 30x30 ft)	10101 00101						
1				1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
2.					/dric soil and wetland h disturbed or problemat		
0	= Total Cove	er		p. cocht, amess			
% Bare Ground in Herb Stratum 97 %				Hydrophytic Ve	getation Present?	X Yes	No
Remarks:							

S-30

	Matrix			Redox Fe	eatures						
(inches)	Color (moist)	% Cold	or (moist)	%	Type ¹	Loc ²	Texture	Remarks			
¹ Type: C=Co	oncentration, D=Depleti	ion, RM=Redu	ıced Matrix,	CS=Cover	ed or Coat	ed Sand Grains.	² Location: PL=	Pore Lining, M=Matrix			
Hydric Soil I	ndicators						Indicate	ors for Problematic Hydric Soils ³ :			
Histo	sol (A1)			Sandy	Gleyed Ma	atrix (S4)	:	1 cm Muck (A9) (LRR I, J)			
	Epipedon (A2)		_		Redox (S5			Coast Prairie Redox (A16) (LRR F, G, H)			
	: Histic (A3)		_		ed Matrix (S	•		Dark Surface (S7) (LRR G)			
	ogen Sulfide (A4)		_		· / Mucky Mi	*		High Plains Depressions (F16)			
	fied Layers (A5) (LRR I	_		Gleyed M	` '		(LRR H outside of MLRA 72 & 73)				
	Muck (A9) (LRR F, G ,	_		ed Matrix (` '	1	Reduced Vertic (F18)				
	eted Below Dark Surface	•	_		Dark Surfa	,		Red Parent Material (TF2)			
	Dark Surface (A12)	-		ed Dark Su			Other (Explain in Remarks)				
	y Mucky Mineral (S1)	-		Depressio	` ,		, ,				
	m Mucky Peat or Peat (H) _			essions (F16)		ors of hydrophylic vegetation and hydrology must be present, unless				
	Mucky Peat or Peat (S		_		RA 72 & 73 o		disturbed or problematic.				
5 cm						,					
							I				
Restrictive I	_ayer: (if observed)	<u> </u>									
Restrictive L	_ayer: (if observed)										
Restrictive I	_ayer: (if observed)						Hydric So	il Present? Yes No _			
Restrictive I Type: Depth (inc	_ayer: (if observed) hes):						Hydric So	il Present? Yes No			
Restrictive I Type: Depth (inc	_ayer: (if observed) hes):						Hydric So	il Present? Yes No _			
Restrictive I Type: Depth (inc	Layer: (if observed) thes): estigated.						Hydric So	il Present? Yes No_			
Restrictive I Type: Depth (inc Remarks: Soils not inve	Layer: (if observed) thes): estigated.						Hydric So	il Present? Yes No			
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd	hes): estigated.		heck all that	apply)		S		il Present? Yes No _			
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd	hes): estigated. Y drology Indicators:			apply)	B11)	S					
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa	Apper: (if observed) thes): estigated. Y drology Indicators: eators (minimum of one				•	S		ors (minimum of two required)			
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High	Auger: (if observed) thes): estigated. Y drology Indicators: eators (minimum of one			Salt Crust (I Aquatic Fau	•			ors (minimum of two required) Surface Soil Cracks (B6)			
Restrictive I Type: Depth (inc) Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur	Auger: (if observed) thes): estigated. Y drology Indicators: eators (minimum of one) ce Water (A1) Water Table (A2)			Salt Crust (I Aquatic Fau Hydrogen S	ına (B13)	· (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living			
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate	ayer: (if observed) thes): estigated. Y drology Indicators: eators (minimum of one) ce Water (A1) Water Table (A2) ation (A3) r Marks (B1)			Salt Crust (I Aquatic Fau Hydrogen S Ory-Season	una (B13) Sulfide Odol u Water Tab	· (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)			
Restrictive I Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir	Apper: (if observed) thes): estigated. Y drology Indicators: cators (minimum of one) ce Water (A1) Water Table (A2) ation (A3)			Salt Crust (I Aquatic Fau Hydrogen S Ory-Season	una (B13) Sulfide Odor Water Tak zospheres or	· (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living			
Restrictive I Type: Depth (inc) Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I	Auger: (if observed) Thes): Destigated. Y Chrology Indicators: Destors (minimum of one			Salt Crust (I Aquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not	una (B13) Sulfide Odor Water Tak zospheres or	(C1) ole (C2) Living Roots (C3)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)			
Restrictive I Type: Depth (inc) Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I X Algal	Auger: (if observed) Thes): Destigated. Y Chrology Indicators: Destors (minimum of one			Salt Crust (I Aquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not Presence of	una (B13) Sulfide Odor Water Take cospheres or tilled) f Reduced	r (C1) ble (C2) Living Roots (C3) Iron (C4)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (
Restrictive I Type: Depth (inc) Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I X Algal Iron I	Auger: (if observed) thes): estigated. Y drology Indicators: eators (minimum of one) ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	is required; c		Salt Crust (I Aquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not Presence of Thin Muck S	una (B13) Sulfide Odor Water Tab zospheres or tilled)	c (C1) cole (C2) cliving Roots (C3) dron (C4)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2)			
Restrictive I Type: Depth (inc) Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I X Algal Iron I	Auger: (if observed) Thes): Destigated. Y Chrology Indicators: Destors (minimum of one	is required; c		Salt Crust (I Aquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not Presence of Thin Muck S	una (B13) sulfide Odoi t Water Tab cospheres or tilled) f Reduced Surface (C7	c (C1) cole (C2) cliving Roots (C3) dron (C4)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (
Restrictive I Type: Depth (inc Remarks: Soils not inve Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate	Auger: (if observed) Thes): Destigated. Y Chrology Indicators: Dators (minimum of one	is required; c		Salt Crust (I Aquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not Presence of Thin Muck S	una (B13) sulfide Odoi t Water Tab cospheres or tilled) f Reduced Surface (C7	c (C1) cole (C2) cliving Roots (C3) dron (C4)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) FAC-Neutral Test (D5)			
Restrictive I Type: Depth (inc) Remarks: Soils not invent HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate	ayer: (if observed) thes): estigated. Y drology Indicators: eators (minimum of one) ce Water (A1) Water Table (A2) eation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aerial I r-Stained Leaves (B9) vations:	is required; c	- S	Salt Crust (I Aquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not Presence of Thin Muck S Other (Expla	una (B13) Sulfide Odol Water Tat Zospheres or tilled) f Reduced Surface (Ci ain in Rema	r (C1) ple (C2) Living Roots (C3) Iron (C4) r) arks)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F			
Restrictive I Type: Depth (inc) Remarks: Soils not invel HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate Field Observ Surface Wate	Auger: (if observed) thes): estigated. Y drology Indicators: eators (minimum of one) ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aerial I r-Stained Leaves (B9) vations: er Present?	is required; c	Yes	Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S Dther (Explant	una (B13) sulfide Odoi Water Tate cospheres or tilled) f Reduced Surface (C7 ain in Remain	c (C1) cole (C2) cliving Roots (C3) cliving (C4) cliving (C4) cliving Roots (C3) cliving Roots (C3)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) FAC-Neutral Test (D5)			
Restrictive I Type: Depth (inc) Remarks: Soils not invel HYDROLOG Wetland Hyd Primary Indic X Surfa High Satur Wate Sedir Drift I X Algal Iron I Inunc Wate Field Observ Surface Wate Water Table	Auger: (if observed) thes): estigated. Y drology Indicators: eators (minimum of one) ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aerial I r-Stained Leaves (B9) vations: er Present?	is required; c	- S	Salt Crust (I Aquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not Presence of Thin Muck S Other (Expla	una (B13) Sulfide Odor Water Tak cospheres or tilled) f Reduced Surface (C7 ain in Remain	r (C1) ple (C2) Living Roots (C3) Iron (C4) r) arks)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F			

Wetland	Determin	nation Da	ata Forn	n - Gre	at Plains Re	gion		
Project/Site: I-25/I-80 Interchange		City	/County: Ch	eyenne/L	aramie	Sampling Da	ate: 8/1/	2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation				State: W	Y Sampling Po	oint: S	-31
Investigator(s): R. Newton, D. Soucy					Section	on, Township, Range	: S12 T13N R	67W
Landform (hillslope, terrace, etc.): pond f	ringe	Lo	cal Relief (c	oncave, c	onvex, none):	concave	Slope (%	o): <u>0-2</u>
Subregion (LRR): G - Western Great Pla		Lat.	. 2245	14.9917	Long:	746564.1097	Datum:	WYE
Soil Map Unit Name: Evanston loam, 0 to 6	percent slope	s				NWI Classification:	UP	L
Are climatic/hydrologic conditions on the site	typical for this	time of year?	? Yes	S X	No	(If no, explain in Rer	narks)	
Are Vegetation, Soil, or Hy	drology	significantly	disturbed? /	Are "Norm	al Circumstance	es" present? Yes	X	No
Are Vegetation , Soil , or Hy	drology	naturally pro	blematic?		(If needed, e	explain any answers	in Remarks.)	-
SUMMARY OF FINDINGS - Attach site map	showing san	- npling point	locations, t	ransects,	important feat	tures, etc.		
	X No							
Hydric Soil Present? Yes	X No	_	Is the Sa	ampled Ar	ea within a Wetl	land?	Yes X No	,
Wetland Hydrology Present? Yes	X No	-		·				
Remarks:	<u> </u>	_						
romano.								
Fringe palustrine scrub-shrub wetland PSS-2		-9 and OW-3	-					
VEGETATION - Use scientific names of pla		5		Domina	nnon Toot Work	rahaati		
Tree Stratum (Plot size: 30x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status		ance Test Work r of Dominant S			
1					e OBL, FACW,		2	(A)
2.				(exclud	ing FAC-):			
3.				Total N	umber of Domin	ant		
4.					Across All Stra		3	(B)
5.								_ ` ′
	0 =	Total Cover		Dercent	of Dominant Sp	necies		
Sapling/Shrub Stratum (Plot size: 15x	15 ft)				e OBL, FACW,		67%	(A/B)
1. Salix melanopsis	60	Υ	FACW					``
2. Elaeagnus angustifolia	12	N	FACU	Prevale	ence Index Wor	ksheet:		
3.					Total % Cove	er of:	Multiply	y by:
4.				OBL	species	35	x 1 = 3	35
5.				FACW	species	72	x 2 = 1	44
	72 =	Total Cover		FAC	species	0	x 3 =	0
Herb Stratum (Plot size: 5x5 ft)				FACU	species	27	x 4 = 10	80
Eleocharis palustris	35	Y	OBL	UPL	species	0	x 5 =	0
2. Elymus repens	15	Υ	FACU	Column	Totals:	134	(A) 2	87 (B)
3. Hordeum jubatum	12	N	FACW		Prev	/alence Index = B/A =	= 2.1	
4				Hydrop	hytic Vegetation	on Indicators:		
5						Test for Hydrophytic	Vegetation	
6						ance Test is >50%.		
7						ence Index is <3.01		
8					•	ological Adaptations¹ ata in Remarks or on		
9								
0					Problema	tic Hydrophytic Vege	tation (Explair	۱)
		Total Cover						
Woody Vine Stratum (Plot size: 30x30	<u>ft</u>)							
11					•	dric soil and wetland h		be
2		- Total O			present, unless	disturbed or problemat	.ic.	
	0 8 %	= Total Cov	eı		Hydrophytic Ve	getation Present?	X Yes	No
					,	g=13.10.1		
Remarks:				1				

SOIL

Sampling Point:

S-31

Profile Desc	cription: (Describe to	o the depth	needed to docu	nent the	e indicator d	or confirm the absen	ce of indicators.)	
Depth	Matrix			Redo	x Features			
(inches)	Color (moist)	%	Color (moist)	%	Туре	Loc ²	Texture	Remarks
0-2	10 YR 3/3	100					muck	
2-8	2.5 Y 2.5/1	100			<u> </u>		sand	
8						_		shovel refusal
			_					
			_					
¹Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix	CS=C	overed or C	oated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil	Indicators						Indicato	ors for Problematic Hydric Soils ³ :
Histo	sol (A1)			Sa	ndy Gleyed	Matrix (S4)	1	cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)		-	Sa	ndy Redox	(S5)		coast Prairie Redox (A16) (LRR F, G, H)
	(Histic (A3)		-	Str	ripped Matr	ix (S6)		Park Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)		-			Mineral (F1)		ligh Plains Depressions (F16)
	ified Layers (A5) (LR	RF)	-			d Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	•	-		pleted Mat		R	educed Vertic (F18)
	eted Below Dark Sur		-			urface (F6)		ed Parent Material (TF2)
	Dark Surface (A12)		-	— De	pleted Darl	Surface (F7)		Other (Explain in Remarks)
Sandy Mucky Mineral (S1)					· edox Depre:			ors of hydrophylic vegetation and
	m Mucky Peat or Pe		R G, H)			epressions (F16)		hydrology must be present, unless
	Mucky Peat or Peat		-		_	73 of LRR H)	disturbe	d or problematic.
			·					
_	Layer: (if observed)							
Type:	, ,							
Depth (inc	enes):						Hydric So	I Present? Yes X No
Remarks:								
HYDROLOG	Υ							
Wetland Hyd	drology Indicators:							
Primary Indic	cators (minimum of o	ne is requi	red; check all tha	t apply)		S	econdary Indicato	rs (minimum of two required)
X Surfa	ice Water (A1)			Salt Cru	ıst (B11)			Surface Soil Cracks (B6)
X High	Water Table (A2)			Aquatic	Fauna (B1	3)	<u></u>	Sparsley Vegetated Concave Surf. (B8)
X Satur	ration (A3)			Hydroge	en Sulfide (Odor (C1)		Drainage Patterns (B10)
Wate	er Marks (B1)			Dry-Sea	ason Water	Table (C2)		Oxidized Rhizospheres on Living
Sedir	ment Deposits (B2)			Oxidized	Rhizosphere	s on Living Roots (C3)		Roots (C3) (where tilled)
Drift I	Deposits (B3)			(where	not tilled)			Crayfish Burrows (C8)
Algal	Mat or Crust (B4)			Presend	ce of Reduc	ed Iron (C4)		 Saturation Visible on Aerial Imagery (C9)
Iron [Deposits (B5)			Thin Mu	ıck Surface	(C7)	X	Geomorphic Position (D2)
	dation Visible on Aeri	ial Imagery			Explain in R			FAC-Neutral Test (D5)
Wate	er-Stained Leaves (B	9)	· · · —	•	•	•		Frost-Heave Hummocks (D7) (LRR F)
Field Obser	vations:							_
Surface Wat	er Present?		Yes	Χ	No	Depth (inches)	8	Wetland Hydrology
Water Table	Present?		Yes	X	No	Depth (inches)	4	Present?
	resent? (includes ca	pillary fring	-	X	No	Depth (inches)	surface	- X Yes No
Remarks:			-				-	
. tomarks.								

Applicant/Covers Wyouring Dept. of Transportation State WY Sampling Point S-32 Investigator(s) R. Newton, D. Soucy Section, Township, Range S12 t 174 R65W Section Secti	Wetland	Determin	ation Da	ata Forn	n - Gre	at Plains Re	gion		
Investigator(s): R. Newton, D. Soucy	Project/Site: I-25/I-80 Interchange		City	/County: Ch	eyenne/L	aramie	Sampling D	ate:	8/1/2019
Landform (millslope, ferrace, etc.): Iterace	Applicant/Owner: Wyoming Dept. of Tr	ansportation				State: W	Y Sampling Po	oint:	S-32
Subregion (LRR) G Western Great Plains	Investigator(s): R. Newton, D. Soucy					Section	on, Township, Range	e: S12 T13	N R67W
Soli Map Unit Name: Evanson loam, 0 to 6 percent slopes Solidary Unit Name: Evanson loam, 0 to 6 percent slopes Yes X No (If no explain in Remarks) No Ave Vegetation Soli Or Hydrology Inaturally problematic? Without of Yes (If needed, explain any answers in Remarks.) Sulfmiddle Solidary Or Hydrology Inaturally problematic? Without of Yes Without of Yes No Xes N	Landform (hillslope, terrace, etc.): terrace)	Lo	cal Relief <i>(c</i>	oncave, c	onvex, none):	convex	Slope	e (%): 0
Are climatichydrologic conditions on the site typical for this time of year? Yes X No (// no, explain in Remarks) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation Soil or Hydrology and Indicators of the Area (// no Repeder Area (// no Re	Subregion (LRR): G - Western Great Pla	ins	Lat.	. 2245	523.5126	Long:	746574.8401	Dat	um: WYE
Are Vagetation	Soil Map Unit Name: Evanston loam, 0 to 6	percent slope:	s				NWI Classification:		UPL
Are Vegetation	Are climatic/hydrologic conditions on the site	typical for this	time of year?	Yes	s X	No	(If no, explain in Rei	marks)	
Are Vegetation	Are Vegetation , Soil , or Hy	drology	significantly	disturbed? /	Are "Norm	al Circumstance	es" present? Yes		X No
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No X Wetland Hydrology Present Present? Yes X No X Wetland Hydrology Present Yes X No X Wetland Hydrology Present? Yes X No Yes X Wetland Hydrology Present Yes X No Yes X Wetland Hydrology Present Yes X No Yes X Wetland Hydrology Present Yes X No Yes X Wetland Hydrology P		drology	•					in Remark	(s)
Hydrophytic Vegetation Present? Yes			•		rancocte	•			0.)
Prevail Prev			ipinig point	1000110110, 1	ranscots,	important rout			
Remarks: Paired upland point for PSS-2. Paired upland point for PSS-2. Paired upland point for PSS-2. Paired upland point for PSS-2. Paired upland upla	<u> </u>		=	la tha Ca	manlad Ar	oo within o Motl	land?	Vaa	No. V
Paired upland point for PSS-2. VEGETATION - Use scientific names of plants. Dominant Species Salutum (Plot size: 30x30 ft)	<u> </u>		-	is the Sa	impied Ar	ea within a vveti	and?	res	NO X
Paired upland point for PSS-2. VEGETATION - Use scientific names of plants. Absolute Dominant Species Status Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) (excluding FAC-):	Wetland Hydrology Present? Yes	No X	-						
Name	Remarks:								
Dominant Species Spe	Paired upland point for PSS-2.								
Number of Dominant Species	VEGETATION - Use scientific names of pla				T				
That Are OBL, FACW, or FAC:	Troo Stratum (Plot size: 30v30 ft)								
Company Comp	Tiee Stratum (Flot Size. 30x30 it)	% Cover	Species?	Status				0	(4)
Total Number of Dominant Species Across All Strata: 3 (B)	2						011710.		(A)
Septing/Shrub Stratum (Plot size: 15x15 ft)	3				T - 4 - 1 N 1		4		
Percent of Dominant Species	[3	(R)
D					Оробіос	, , , , , , , , , , , , , , , , , , ,	ita.		
Sapiling/Shrub Stratum (Plot size: 15x15 ft) 1. Elaeagnus angustifolia 20	<u> </u>	=	Total Cover		L.				
1.	Sanling/Shruh Stratum (Plot size: 15v							0%	(Λ/R)
Prevalence Index Worksheet:		<u> </u>	V	FΔCII	Triat 7 ti	0 OBE, 17(OW, 1	011710.	- 070	(٨,٥)
Total % Cover of:			<u> </u>	17100	Prevale	ence Index Wor	ksheet		
A					1			Mult	iply by:
Factor F	4.				OBL				
Herb Stratum (Plot size: 5x5 ft) 1. Bromus inermis 12	5.					•	10		20
Herb Stratum (Plot size: 5x5 ft) 1. Bromus inermis 12		20 =	Total Cover				15	x 3 =	45
1. Bromus inermis 12 N UPL UPL species 12 x 5 = 60 60 60 12 x 5 = 60 60 60 12 x 5 = 60 60 60 90 12 x 5 = 60	Herb Stratum (Plot size: 5x5 ft)					species			
3. Hordeum jubatum 4. Glycyrrhiza lepidota 5. Elymus repens 6. 35 Y FACU 6. 2. Dominance Test is >50%. 7. 8. 3. Prevalence Index = 8/A = 3.8 9. 3. Prevalence Index = 8/A = 3.8 4. Hydrophytic Vegetation Indicators: 1. Rapid Test for Hydrophytic Vegetation 2. Dominance Test is >50%. 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 1. Problematic Hydrophytic Vegetation (Explain) 1. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No		12	N	UPL		species			60
3. Hordeum jubatum 10 N FACW Prevalence Index = B/A = 3.8 4. Glycyrrhiza lepidota 20 Y FACU Hydrophytic Vegetation Indicators: 5. Elymus repens 35 Y FACU 1. Rapid Test for Hydrophytic Vegetation 6. 2. Dominance Test is >50%. 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 9. 92 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1. Problematic Hydrophytic Vegetation (Explain) 1. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. We Bare Ground in Herb Stratum 8 % Hydrophytic Vegetation Present? Yes X No	2. Plantago major	15	N	FAC	Column	Totals:	112	(A)	425 (B)
4. Glycyrrhiza lepidota 5. Elymus repens 6. 7. 8. 9. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10	3. Hordeum jubatum	10	N	FACW		Prev	valence Index = B/A		
2. Dominance Test is >50%. 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 1.	4. Glycyrrhiza lepidota	20	Υ		Hydrop	hytic Vegetatio	n Indicators:		
3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) porting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 1.	5. Elymus repens	35	Υ	FACU		-		Vegetation	1
8. 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 9. 7 Problematic Hydrophytic Vegetation (Explain) 1. 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 8 Bare Ground in Herb Stratum 8 % Hydrophytic Vegetation Present? Yes X No	6.					2. Domina	ance Test is >50%.		
porting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Problematic Hydrophytic Vegetation (Explain) 1.	7.					3. Prevale	ence Index is <3.01		
Problematic Hydrophytic Vegetation (Explain) 92 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1.	8.					4. Morpho	ological Adaptations¹	(Provide s	sup-
Second Stratum (Plot size: 30x30 ft)	9.					porting da	ata in Remarks or on	a separate	e sheet)
Moody Vine Stratum (Plot size: 30x30 ft) 1.	0.					Problema	tic Hydrophytic Vege	etation (Ex	plain)
1		92 =	Total Cover						
2. present, unless disturbed or problematic. 0 = Total Cover 8 8 % Hydrophytic Vegetation Present? Yes X No	Woody Vine Stratum (Plot size: 30x30	ft)							
2. present, unless disturbed or problematic. 0 = Total Cover 8 8 % Hydrophytic Vegetation Present? Yes X No	1.					¹ Indicators of hv	dric soil and wetland h	nydrology m	iust be
% Bare Ground in Herb Stratum 8 % Hydrophytic Vegetation Present? Yes X No	2.					•			-
		0	= Total Cove	er				-	
Remarks:	% Bare Ground in Herb Stratum	3 %				Hydrophytic Ve	getation Present?	١	res X No
Remarks:									
	Remarks:				1				

SOIL

S-32

Sampling Point:

Profile Desc	ription: (Describe t	o the depth	needed to docu	ment the in	ndicator or c	onfirm the absence	ce of indicators.)			
Depth	Matrix			Redox F	eatures					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0-3	10 YR 3/2	100					Clay			
3-18	10 YR 3/2	100					Sand			
¹ Type: C=Co	ncentration, D=Dep	oletion, RM	=Reduced Matrix	, CS=Cove	ered or Coat	ed Sand Grains.	² Location: PL=Po	ore Lining, M=Matrix		
Hydric Soil I	ndicators						Indicators	for Problematic Hydric Soils ³ :		
Histos	sol (A1)			Sand	ly Gleyed Ma	atrix (S4)		m Muck (A9) (LRR I, J)		
Histic	Epipedon (A2)				ly Redox (S		Coa	ast Prairie Redox (A16) (LRR F, G, H)		
	Histic (A3)			Strip	ped Matrix (S6)		k Surface (S7) (LRR G)		
	gen Sulfide (A4)			ny Mucky Mi			h Plains Depressions (F16)			
	ied Layers (A5) (LR	RR F)			ny Gleyed M	` '		LRR H outside of MLRA 72 & 73)		
	Muck (A9) (LRR F,	,			eted Matrix (,	duced Vertic (F18)		
	ted Below Dark Sur				x Dark Surf	,		l Parent Material (TF2)		
	Dark Surface (A12)			eted Dark Si	` ,		ner (Explain in Remarks)			
	/ Mucky Mineral (S1			x Depressio	, ,					
	RR G, H)		•	essions (F16)	³ Indicators of hydrophylic vegetation and wetland hydrology must be present, unless					
	2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F)					of LRR H)	disturbed or problematic.			
Dootrictive I	aver (if about ad)		· 				Γ			
_	.ayer: (if observed)									
Type:	(hoo) :						Hardela Call	2		
Depth (incl							Hydric Soil	Present? Yes No X		
Remarks:										
HYDROLOG	Y									
Wetland Hyd	Irology Indicators:									
Primary Indic	ators (minimum of o	one is requi	ired; check all the	at apply)		Se	econdary Indicators	(minimum of two required)		
Surfac	ce Water (A1)			Salt Crust	(B11)		:	Surface Soil Cracks (B6)		
High \	Water Table (A2)			Aquatic Fa	auna (B13)			Sparsley Vegetated Concave Surf. (B8)		
Satura	ation (A3)			Hydrogen	Sulfide Odo	r (C1)		Drainage Patterns (B10)		
Water	Marks (B1)			Dry-Seaso	n Water Tal	ble (C2)		Oxidized Rhizospheres on Living		
Sedim	nent Deposits (B2)			Oxidized Rh	nizospheres o	n Living Roots (C3)		Roots (C3) (where tilled)		
Drift D	Deposits (B3)			(where no	t tilled)			Crayfish Burrows (C8)		
Algal	Mat or Crust (B4)			Presence	of Reduced	Iron (C4)		Saturation Visible on Aerial Imagery (C9)		
Iron D	eposits (B5)			Thin Muck	Surface (C	7)		Geomorphic Position (D2)		
Inund	ation Visible on Aer	ial Imagery	(B7)	Other (Exp	olain in Rem	arks)		FAC-Neutral Test (D5)		
Water	r-Stained Leaves (B	9)		•				Frost-Heave Hummocks (D7) (LRR F)		
Field Observ	rations:									
Surface Wate	er Present?		Yes	Ν	No X D	epth (inches)		Wetland Hydrology		
Water Table I	Present?		Yes	<u> </u>	No X D	epth (inches)		Present?		
	esent? (includes ca	pillary fring	ne) Yes			epth (inches)		Yes X No		
Remarks:										

Wetland I	Determin	ation Da	ata Forn	า - Gre	at Plains Reg	jion			
Project/Site: I-25/I-80 Interchange		City	/County: Che	eyenne/L	aramie	Sampling [Date:	8/1/2019	
Applicant/Owner: Wyoming Dept. of Tra	nsportation				State: WY	_ Sampling P	oint:	S-33	
Investigator(s): R. Newton, D. Soucy					Section	– n, Township, Rang	e: S12 T1	3N R67W	
Landform (hillslope, terrace, etc.): depress	sion	Lo	cal Relief (co	oncave, c	onvex, none):	concave	Slop	pe (%): 0-	1
Subregion (LRR): G - Western Great Plai	ns	Lat	. 2245	96.2283	Long:	748815.098		atum: WY I	E
Soil Map Unit Name: Evanston loam, 0 to 6	percent slopes					IWI Classification:	PE	MA/PEMC	;
Are climatic/hydrologic conditions on the site t	ypical for this t	time of year?	Yes	, X	No (If no, explain in Re	emarks)		
Are Vegetation , Soil , or Hyd	drology	significantly	disturbed? A	re "Norm	al Circumstances	s" present? Yes	,	X No	
Are Vegetation , Soil , or Hyd		naturally pro				xplain any answers	in Domar		
				ta			ili Nelliai	NS.)	
SUMMARY OF FINDINGS - Attach site map		ipinig point	iocalions, ti	ansects,	important leatu	ires, etc.			
Hydrophytic Vegetation Present? Yes						10	., .,		
Hydric Soil Present? Yes	X No		Is the Sa	mpled Ar	ea within a Wetla	nd?	Yes X	No	
Wetland Hydrology Present? Yes	X No								
Remarks: NWI-mapped depressional palustrine emerger	at wetland PEN	M-10							
VEGETATION - Use scientific names of plan		VI 10.							
real real real real real real real real	Absolute	Dominant	Indicator	Domina	ınce Test Works	heet:			
Tree Stratum (Plot size: 30x30 ft)	% Cover	Species?	Status	Number	of Dominant Spe	ecies			
1.				That Are	e OBL, FACW, or	r FAC:	3	3 ((A)
2.				(excludi	ng FAC-):				
3.				Total No	umber of Domina	nt			
4.					Across All Strata		3	3 ((B)
5.							1		
Sapling/Shrub Stratum (Plot size: 15x1	0 = 7 5 ft)	Total Cover			of Dominant Spe e OBL, FACW, or		10	0% (A,	/B)
2.				Prevale	nce Index Work	sheet:			
3.					Total % Cover	of:	Mu	Itiply by:	
4				OBL	species	15	x 1 =	15	_
5				FACW	species	60	x 2 =	120	_
	0 = 7	Total Cover		FAC	species	23	x 3 =	69	_
Herb Stratum (Plot size: 5x5 ft)				FACU	species	0	x 4 =	0	_
Eleocharis microcarpa	15	N	OBL	UPL	species	0	x 5 =	0	_
2. Carex praegracilis	20	Υ	FACW	Column	Totals:	98	(A)	204	(B)
3. Alopecurus pratensis	5	N	FACW		Preva	lence Index = B/A	= ;	2.1	
4. Distichlis spicata	35	Υ	FACW	Hydrop	hytic Vegetation	Indicators:			
5. Elymus riparius	23	Υ	FAC		1. Rapid Te	est for Hydrophytic	: Vegetatio	n	
6.					X 2. Dominar	nce Test is >50%.			
7						nce Index is <3.01			
8						ogical Adaptations			
9					porting dat	a in Remarks or o	n a separa	ite sheet)	
0.					Problemati	c Hydrophytic Veg	etation (E	xplain)	
	98 = 7	Total Cover							
Woody Vine Stratum (Plot size: 30x30 f	<u>t</u>)								
1					¹ Indicators of hyd	ric soil and wetland	hydrology i	must be	
2.					present, unless di	sturbed or problema	atic.		
	0	= Total Cov	er						-
% Bare Ground in Herb Stratum 2	%				Hydrophytic Vege	etation Present?	X	Yes	No
	=								
Remarks:									

Profile Desc	ription: (Describe t	to the depth	needed to docume	ent the indi	icator or	confirm the absen	ce of indicators.)	
Depth	Matrix			Redox Fea	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10 YR 3/2	100					Silty Clay	
6-16	10 YR 6/2	95	7.5 YR 6/8	5	С	M	Sand	
								·
¹ Type: C=Co	ncentration, D=Dep	oletion, RM=	Reduced Matrix, C	S=Covere	ed or Coa	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil I	ndicators						Indicato	rs for Problematic Hydric Soils ³ :
_	sol (A1)			Sandy	Gleved N	Matrix (S4)		cm Muck (A9) (LRR I, J)
	Epipedon (A2)			Sandy	-			oast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)			_	d Matrix	-		ark Surface (S7) (LRR G)
	gen Sulfide (A4)				/lineral (F1)		igh Plains Depressions (F16)	
	ied Layers (A5) (LF	RR F)		_	-	Matrix (F2)	 -	(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F ,	-		_	ed Matrix		R	educed Vertic (F18)
	ted Below Dark Sur			_		face (F6)		ed Parent Material (TF2)
	Dark Surface (A12)				Surface (F7)		ther (Explain in Remarks)	
	/ Mucky Mineral (S	_			ions (F8)			
	R G. H)	_	•	pressions (F16)	³ Indicators of hydrophylic vegetation and wetland hydrology must be present, unless			
	2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F)					of LRR H)		d or problematic.
	-					,	1	
	.ayer: (if observed)							
Type:	, ,							
Depth (inc.	nes):						Hydric Soi	I Present? Yes X No
Remarks:								
HYDROLOG	<u> </u>							
	rology Indicators:							
_	ators <i>(minimum of c</i>		ed: check all that a	apply)		s	econdary Indicator	rs (minimum of two required)
-	ce Water (A1)			alt Crust (B	R11)	_		Surface Soil Cracks (B6)
	Water Table (A2)			quatic Faur	,		·	Sparsley Vegetated Concave Surf. (B8)
— ·	ation (A3)			/drogen Sı			·	Drainage Patterns (B10)
	Marks (B1)			v-Season			·	Oxidized Rhizospheres on Living
	nent Deposits (B2)			•		on Living Roots (C3)	·	Roots (C3) (where tilled)
	Deposits (B3)			here not t	•	on Living 1.00ts (00)		Crayfish Burrows (C8)
	Mat or Crust (B4)		•		•	d Iron (C4)	·	Saturation Visible on Aerial Imagery (C9)
	Deposits (B5)			nin Muck S		` ,		Geomorphic Position (D2)
	ation Visible on Aer	rial Imagery		her (Expla	,	,		FAC-Neutral Test (D5)
	r-Stained Leaves (E	0 ,		irior (Explu		nancoj		Frost-Heave Hummocks (D7) (LRR F)
								-
Field Observ								
Surface Water	er Present?		Yes			Depth (inches)		Wetland Hydrology
Water Table			Yes			Depth (inches)		Present?
Saturation Pr	esent? (includes ca	apillary fringe	e) Yes	No	X	Depth (inches)		X_YesNo
Remarks:								

Wetland	Determination	on Data	Form - Gre	at Plains Reç	jion	
Project/Site: I-25/I-80 Interchange		City/Cou	nty: Cheyenne/L	aramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation	•		State: WY	Sampling Point:	S-34
Investigator(s): R. Newton, D. Soucy				Sectio	n, Township, Range: S	12 T13N R67W
Landform (hillslope, terrace, etc.): minor	slope	Local R	telief <i>(concave, c</i>	onvex, none):	none	Slope (%): 0-1
Subregion (LRR): G - Western Great Pla	ains	Lat.	224606.3702	Long:	748817.3358	Datum: WY E
Soil Map Unit Name: Evanston loam, 0 to 6	percent slopes			1	NWI Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for this time	of year?	Yes X	No (If no, explain in Remark	ks)
Are Vegetation , Soil , or Hy	/drology signi	ficantly distu	irbed? Are "Norm	al Circumstance	s" present? Yes	X No
	/drology natu	rally problem	natic?	(If needed, e.	xplain any answers in R	Remarks.)
SUMMARY OF FINDINGS - Attach site map				,	,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Hydrophytic Vegetation Present? Yes	No X	, po	,	, p = 1 tall 1 tall 1		
Hydric Soil Present? Yes		le	s the Sampled Ar	ea within a Wetla	and? Yes	No X
-		18	s trie Sampled Al	ea williii a wella	iliu: 165	NOX
Wetland Hydrology Present? Yes _	No_X					
Remarks:						
Paired upland point for PEM-10.						
VEGETATION - Use scientific names of pla	ants.		<u> </u>			
<u>Tree Stratum</u> (Plot size: 30x30 ft)			.outo.	ance Test Works r of Dominant Sp		
1	70 GOVEI - OPE	JIC3: 01		e OBL, FACW, o		1 (A)
2				ing FAC-):	_	(^/)
3.			—— Total N	umbar of Domina	.mt	
4.				umber of Domina Across All Strat		2 (B)
5.			<u> </u>	7 7 10 1000 7 111 0 11 0 11		
Sapling/Shrub Stratum (Plot size: 15x	0 = Total 15 ft)	Cover		t of Dominant Spe e OBL, FACW, o		50% (A/B)
2.			Prevale	ence Index Work	sheet:	
3.				Total % Cover	of:	Multiply by:
4.			OBL	species	0 x 1	
5.			FACW	species	10 x 2	= 20
	0 = Total	Cover	FAC	species	50 x 3	= 150
Herb Stratum (Plot size: 5x5 ft)			FACU	species	40 x 4	= 160
1. Elymus riparius	50`	<u>Y</u> F	AC UPL	species	0 x 5	= 0
2. Distichlis spicata	10 1	N FA	ACW Column	Totals:	100 (A) 330 (B)
3. Poa pratensis	40	Y F/	ACU	Preva	alence Index = B/A =	3.3
4			Hydrop	hytic Vegetation	n Indicators:	
5	·			1. Rapid T	est for Hydrophytic Veg	etation
6.					nce Test is >50%.	
7					nce Index is <3.01	
8				•	logical Adaptations¹ (Pro	•
9				porting dai	a in Remarks or on a s	eparate sneet)
0				Problemat	ic Hydrophytic Vegetation	on (Explain)
	100 = Total	Cover				
Woody Vine Stratum (Plot size: 30x30	ft)					
1				¹ Indicators of hyd	Iric soil and wetland hydro	ology must be
2				present, unless d	isturbed or problematic.	
<u>-</u>		tal Cover				
% Bare Ground in Herb Stratum	0%			Hydrophytic Veg	etation Present?	Yes X No
Remarks:						

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Profile Desc	ription: (Describe t	o the depth	needed to docume	nt the ind	licator or	confirm the absence	ce of indicators.)	
Depth	Matrix		F	Redox Fe	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10 YR 3/2	100					Clay Loam	
6-18	10 YR 5/3	100					Sand	
¹Type: C=Co	ncentration, D=Dep	oletion, RM=	Reduced Matrix, C	S=Covere	ed or Co	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil I	ndicators						Indicato	ors for Problematic Hydric Soils ³ :
Histos	sol (A1)			Sandy	Gleyed I	Matrix (S4)		cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)			_	Redox (oast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)			Strippe	ed Matrix	(S6)		Park Surface (S7) (LRR G)
	gen Sulfide (A4)					Mineral (F1)		ligh Plains Depressions (F16)
	ied Layers (A5) (LF	RR F)			•	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F,	G , H)		_	ed Matrix		F	educed Vertic (F18)
 Deple	ted Below Dark Sur	face (A11)		Redox	Dark Su	rface (F6)	R	ed Parent Material (TF2)
Thick	Dark Surface (A12))		 Deplete	ed Dark	Surface (F7)		Other (Explain in Remarks)
	/ Mucky Mineral (S			Redox	Depress	sions (F8)	3Indicat	ors of hydrophylic vegetation and
2.5 cn	n Mucky Peat or Pe	at (S2) (LRf	R G, H)	— High P	lains De	pressions (F16)		hydrology must be present, unless
5 cm	Mucky Peat or Peat	(S3) (LRR	F)	(MLR	A 72 & 7	3 of LRR H)	disturbe	ed or problematic.
Restrictive L	ayer: (if observed)		-					
Type:	,							
Depth (incl	hes):						Hydric So	il Present? Yes No X
Remarks:	,						,	
Remarks.								
HYDROLOG								
	rology Indicators:							
	ators (minimum of o	one is require				Se	econdary Indicato	rs (minimum of two required)
	ce Water (A1)			It Crust (E	,			_Surface Soil Cracks (B6)
	Water Table (A2)			uatic Fau				Sparsley Vegetated Concave Surf. (B8)
	ation (A3)			drogen S				_ Drainage Patterns (B10) Oxidized Rhizospheres on Living
	Marks (B1)		 '	•		able (C2)		Roots (C3) (where tilled)
	nent Deposits (B2)				•	on Living Roots (C3)		Crayfish Burrows (C8)
	Deposits (B3)		•	here not		(0.1)		<u> </u>
	Mat or Crust (B4)					d Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	eposits (B5)			in Muck S	,	•		Geomorphic Position (D2)
	ation Visible on Aer		(B7) Oti	her (Expla	ain in Re	marks)		FAC-Neutral Test (D5)
Water	-Stained Leaves (B	i9)						Frost-Heave Hummocks (D7) (LRR F)
Field Observ								
Surface Wate	er Present?		Yes	No	<u> </u>	Depth (inches)		Wetland Hydrology
Water Table I			Yes	No	<u> </u>	Depth (inches)		Present?
Saturation Pr	esent? <i>(includes ca</i>	pillary fringe	e) Yes	No	<u> </u>	Depth (inches)		YesX_No
Remarks:								

Wetland Determinati	on Data Form	ı - Great Plains Re	gion	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date	8/1/2019
Applicant/Owner: Wyoming Dept. of Transportation		State: W	Y Sampling Point	S-35
Investigator(s): R. Newton, D. Soucy		Section	on, Township, Range: S	12 T13N R67W
Landform (hillslope, terrace, etc.): depression	Local Relief (co	ncave, convex, none):	concave	Slope (%): 0
Subregion (LRR): G - Western Great Plains	 Lat. 22484	41.4713 Long:	746746.6771	Datum: WY E
Soil Map Unit Name: Evanston loam, 0 to 6 percent slopes			NWI Classification:	PEMA/PEMC
Are climatic/hydrologic conditions on the site typical for this time	of year? Yes	X No	(If no, explain in Remar	ks)
Are Vegetation , Soil , or Hydrology sigr	nificantly disturbed? A	re "Normal Circumstance	es" present? Yes	X No
<u> </u>	urally problematic?	(If needed, e	explain any answers in I	Remarks.)
SUMMARY OF FINDINGS - Attach site map showing samplin		,	,	,
Hydrophytic Vegetation Present? Yes X No	g point roddiono, a	anooto, important rout	41.00, 0101	
lii i i i	la tha Sa	mpled Area within a Wetla	and? Vac	V No
·	is the Sai	ripieu Area within a wett	anu! res	<u> </u>
Wetland Hydrology Present? Yes X No				
Remarks:				
NWI-mapped depressional palustrine emergent wetland PEM-11 vegetation and wetland hydrology.	. No right-of-entry for	site; hydric soils assume	ed in presence of domin	ant hydrophytic
VEGETATION - Use scientific names of plants.				
	minant Indicator	Dominance Test Work		
Tree Stratum (Plot size: 30x30 ft) % Cover Spe	ecies? Status	Number of Dominant Sp		
<u> </u>		That Are OBL, FACW, c	or FAC:	1 (A)
^{2.}		(cholumny / / to / t		
3		Total Number of Domina		4 (5)
<u> </u>		Species Across All Strat	(a:	1 (B)
5	100000			
	l Cover	Percent of Dominant Sp		1000/
Sapling/Shrub Stratum (Plot size: 15x15 ft)		That Are OBL, FACW, o	or FAC:	100% (A/B)
1				
^{2.}		Prevalence Index Worl		N.A. alatinalis desse
3		Total % Cove		Multiply by:
<u>-</u>		OBL species	100 x 1	
5	1.0	FACW species	0 x 2	
<u></u>	l Cover	FAC species	0 x 3	
Herb Stratum (Plot size: 5x5 ft)	V OPI	FACU species	0 x 4	
1. Typha angustifolia 100	Y OBL	UPL species	0 x 5	
2		Column Totals:	100 (A	
3			alence Index = B/A =	1.0
4		Hydrophytic Vegetatio		notation
5			「est for Hydrophytic Veุ ance Test is >50%.	jetation
6			ence Index is <3.01	
·			plogical Adaptations¹ (Pi	rovide sun-
8		•	ita in Remarks or on a s	•
]9			tic Hydrophytic Vegetat	
100 = Tota	l Cover	Problema	lic riyuropriyiic vegetat	on (Explain)
	i Covei			
Woody Vine Stratum (Plot size: 30x30 ft)		1		
1			dric soil and wetland hydr	ology must be
Z	etal Cavar	present, unless of	listurbed or problematic.	
<u></u>	otal Cover	Headan de 10 ce	natation Dunners	V v **
% Bare Ground in Herb Stratum 0 %		Hydrophytic Veg	getation Present?	X Yes No
Remarks:				

Depth (inches)	Matrix		Redox Feature	es		
,	Color (moist) %	Color (moist)	% Ty _l	pe ¹ Loc ²	Texture	Remarks
		<u> </u>				
		_				
		_				
¹ Type: C=Co	oncentration, D=Depletion, RM=	Reduced Matrix (S=Covered or	r Coated Sand Grains	² l ocation: PI =I	Pore Lining, M=Matrix
Hydric Soil I	·	,				rs for Problematic Hydric Soils ³ :
•	sol (A1)		Sandv Glev	ed Matrix (S4)		cm Muck (A9) (LRR I, J)
	Epipedon (A2)		Sandy Red			past Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)	_	Stripped Ma	, ,		ark Surface (S7) (LRR G)
	gen Sulfide (A4)	_	_	cky Mineral (F1)		igh Plains Depressions (F16)
	ied Layers (A5) (LRR F)		_	yed Matrix (F2)	 ''	(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, G, H)	_	Depleted M		P	educed Vertic (F18)
	ted Below Dark Surface (A11)			k Surface (F6)		ed Parent Material (TF2)
	Dark Surface (A12)			ark Surface (F7)		ther (Explain in Remarks)
	/ Mucky Mineral (S1)	_		ressions (F8)		
	n Mucky Peat or Peat (S2) (LR			Depressions (F16)		rs of hydrophylic vegetation and hydrology must be present, unless
	Mucky Peat or Peat (S3) (LRR		_	& 73 of LRR H)		d or problematic.
		<u></u>	•			
	.ayer: (if observed)					
Type:	, ,					
Depth (incl	nes):				Hydric Soi	Present? Yes X No No
Remarks:						
No right-of-en	try for this wetland; no soil pit o	lug. Hydric soils as	sumed in pres	ence of dominant hyd	rophytic vegetation	and wetland hydrology.
HYDROLOG	Y					
Wetland Hyd	Irology Indicators:					
_	ators (minimum of one is requi	red; check all that a	apply)	5	Secondary Indicator	o (minimum of two required)
Primary Indic						s (minimum or two required)
•	ce Water (A1)	Sa	alt Crust (B11)			Surface Soil Cracks (B6)
Surfac	ce Water (A1) Water Table (A2)		alt Crust (B11) quatic Fauna (E			Surface Soil Cracks (B6)
Surfac High \	Water Table (A2)	A	ıuatic Fauna (E	B13)	_	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Surfac High \ Satura	Nater Table (A2) ation (A3)	Ao	quatic Fauna (E ⁄drogen Sulfide	B13) e Odor (C1)		Surface Soil Cracks (B6)
Surfac High \ Satura Water	Water Table (A2) ation (A3) Marks (B1)	Ao Hı	quatic Fauna (I vdrogen Sulfide y-Season Wat	B13) e Odor (C1) ter Table (C2)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Surface High \ Satura Water Sedim	Water Table (A2) ation (A3) Marks (B1) nent Deposits (B2)	A(uatic Fauna (I drogen Sulfide y-Season Wat	B13) e Odor (C1) ter Table (C2) eres on Living Roots (C3)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Surface High \ Satura Water Sedim Drift C	Water Table (A2) ation (A3) Marks (B1) nent Deposits (B2) Deposits (B3)	A(quatic Fauna (I rdrogen Sulfide y-Season Wat idized Rhizosph rhere not tilled	B13) e Odor (C1) ter Table (C2) eres on Living Roots (C3))	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Surface High \ Satura Water Sedim Drift E	Water Table (A2) ation (A3) Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)	A(quatic Fauna (I vdrogen Sulfide y-Season Wat idized Rhizosph rhere not tilled esence of Red	B13) e Odor (C1) ter Table (C2) eres on Living Roots (C3) d) duced Iron (C4)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8)
Surface High N Satura Water Sedim Drift D Algal	Water Table (A2) ation (A3) Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	A(quatic Fauna (I vdrogen Sulfide y-Season Wat idized Rhizospho rhere not tilled esence of Red in Muck Surfa	B13) e Odor (C1) ter Table (C2) eres on Living Roots (C3) d) duced Iron (C4) ice (C7)	<u> </u>	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Surface High \ Satura Water Sedim Drift D Algal Iron D	Water Table (A2) ation (A3) Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aerial Imagery	A(quatic Fauna (I vdrogen Sulfide y-Season Wat idized Rhizosph rhere not tilled esence of Red	B13) e Odor (C1) ter Table (C2) eres on Living Roots (C3) d) duced Iron (C4) ice (C7)	<u> </u>	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) FAC-Neutral Test (D5)
Surface High N Satura Water Sedim Drift D Algal Iron D Inunda	Water Table (A2) ation (A3) Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aerial Imagery r-Stained Leaves (B9)	A(quatic Fauna (I vdrogen Sulfide y-Season Wat idized Rhizospho rhere not tilled esence of Red in Muck Surfa	B13) e Odor (C1) ter Table (C2) eres on Living Roots (C3) d) duced Iron (C4) ice (C7)	<u> </u>	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Surface High N Satura Water Sedim Drift D Algal Iron D Inund Water	Water Table (A2) ation (A3) Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aerial Imagery r-Stained Leaves (B9)	A(quatic Fauna (I vdrogen Sulfide y-Season Wat idized Rhizospho rhere not tilled esence of Red in Muck Surfa	B13) e Odor (C1) ter Table (C2) eres on Living Roots (C3) d) duced Iron (C4) ice (C7)	<u> </u>	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) FAC-Neutral Test (D5)
Surface High N Satura Water Sedim Drift D Algal Iron D Inunda	Water Table (A2) ation (A3) Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aerial Imagery r-Stained Leaves (B9)	A(quatic Fauna (I vdrogen Sulfide y-Season Wat idized Rhizospho rhere not tilled esence of Red in Muck Surfa	B13) e Odor (C1) ter Table (C2) eres on Living Roots (C3) d1) duced Iron (C4) ace (C7) a Remarks) Depth (inches)	<u> </u>	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Surface High \ Satura Water Sedim Drift D Algal Iron D Inund Water Field Observ Surface Water	Water Table (A2) ation (A3) Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aerial Imagery r-Stained Leaves (B9) vations: er Present?	Ac	quatic Fauna (I vdrogen Sulfide y-Season Wat idized Rhizospho where not tilled esence of Red in Muck Surfa her (Explain in	B13) e Odor (C1) ter Table (C2) eres on Living Roots (C3) d) duced Iron (C4) ce (C7) n Remarks)	<u> </u>	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Determination	on Data Form	- Great Plains Regi	on	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Transportation		State: WY	Sampling Point:	S-36
Investigator(s): R. Newton, D. Soucy		Section,	Township, Range: S12	113N R67W
Landform (hillslope, terrace, etc.): roadside ditch	Local Relief (co	ncave, convex, none):	concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	Lat. 22457	79.5319 Long:	745203.7592	Datum: WY E
Soil Map Unit Name: Merden silty clay loam, 0 to 3 percent slop	oes	NV	VI Classification:	UPL
Are climatic/hydrologic conditions on the site typical for this time of	of year? Yes	X No(If	no, explain in Remarks)
Are Vegetation, Soil, or Hydrologysigni	ficantly disturbed? A	re "Normal Circumstances"	present? Yes	X No
Are Vegetation , Soil , or Hydrology nature	rally problematic?	(If needed, exp	olain any answers in Rei	marks.)
SUMMARY OF FINDINGS - Attach site map showing sampling	g point locations, tr	ansects, important feature	es, etc.	
Hydrophytic Vegetation Present? Yes X No				
Hydric Soil Present? Yes No X	Is the Sar	npled Area within a Wetlan	d? Yes	No X
Wetland Hydrology Present? Yes X No			_	
Remarks:				
Depressional area with deminant hydrophytic vagetation and wet	and hydrology but la	okina bydrio opilo		
Depressional area with dominant hydrophytic vegetation and wetl	and riydrology but la	cking nyanc soils.		
VEGETATION - Use scientific names of plants.		Daminanaa Taat Madalah		
	inant Indicator cies? Status	Dominance Test Worksh Number of Dominant Spec		
1.		That Are OBL, FACW, or I		1 (A)
2.		(excluding FAC-):		
3.		Total Number of Dominan	ŀ	
4.		Species Across All Strata:		1 (B)
5.				
Sapling/Shrub Stratum (Plot size: 15x15 ft) 1.	Cover	Percent of Dominant Spec That Are OBL, FACW, or I		100% (A/B)
2.		Prevalence Index Works	heet:	
3		Total % Cover of	of:	Multiply by:
4		OBL species	0 x 1 =	0
5		FACW species	100 x 2 =	200
0 = Total	Cover	FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft) 1. Phalaris arundinacea 88	/ FACIA	FACU species UPL species	$\frac{0}{0}$ x 4 = 0 x 5 =	0
	Y FACW FACW	UPL species Column Totals:		
2. Junicus banneus 12 1	Y FACW		100 (A) ence Index = B/A =	200 (B) 2.0
4.		Hydrophytic Vegetation		2.0
5.			st for Hydrophytic Veget	tation
6.			ce Test is >50%.	
7.		X 3. Prevalence	ce Index is <3.01	
8. 9.			gical Adaptations¹ (Prov in Remarks or on a sep	
10.		Problematic	Hydrophytic Vegetation	ı (Explain)
100 = Total	Cover		, , , ,	,
Woody Vine Stratum (Plot size: 30x30 ft)				
1.		¹ Indicators of hydri	c soil and wetland hydrolo	ngy must he
2.		•	turbed or problematic.	by must be
0 = To	tal Cover		_	
% Bare Ground in Herb Stratum 0 %		Hydrophytic Veget	ation Present?	X YesNo
Remarks:		<u> </u>		

SOIL

Sampling Point:

S-36

(! I \	Matrix			Redox Feature	es		
(inches)	Color (moist)	%	Color (moist)	% Ту	pe ¹ Loc ²	Texture	Remarks
0-8	10 YR 3/1	100				Clay Loam	
8							shovel refusal
,							
,							
¹ Type: C=Cc	ncentration, D=Dep	letion RM=R	Reduced Matrix	CS=Covered o	Coated Sand G	Grains ² Location	PL=Pore Lining, M=Matrix
Hydric Soil I			.oudou mann,				icators for Problematic Hydric Soils ³ :
•	sol (A1)			Sandy Glev	red Matrix (S4)	illa	1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)			Sandy Red			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)			Stripped M			Dark Surface (S7) (LRR G)
	gen Sulfide (A4)				ky Mineral (F1)		High Plains Depressions (F16)
	ied Layers (A5) (LR	D E/			ed Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, (,	_		` ,		
	ted Below Dark Surf			Depleted M	Surface (F6)		Reduced Vertic (F18) Red Parent Material (TF2)
	Dark Surface (A12)	ace (ATT)			ark Surface (F7)		Other (Explain in Remarks)
	/ Mucky Mineral (S1	١			ressions (F8)		_ ` ` ' '
	n Mucky Peat or Pe		G H/		Depressions (F6)		dicators of hydrophylic vegetation and tland hydrology must be present, unless
	Mucky Peat or Peat		_		& 73 of LRR H)		curbed or problematic.
		(00) (LITIT I		(WILIUA 72	Q 73 01 ERR 11,		
Restrictive L	.ayer: (if observed)						
Type:							
Type: Depth <i>(inc</i>	hes):					Hydric	Soil Present? Yes No X
- · · -	hes):					Hydric	Soil Present? Yes No X
Depth (inc	hes) :					Hydric	Soil Present? Yes No X
Depth (inc						Hydric	Soil Present? Yes No _X
Depth (inc	Υ					Hydric	Soil Present? Yes No X
Depth (inc Remarks: HYDROLOG Wetland Hyd	Y Irology Indicators:	ne is require	d: check all that	apply)			
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	Y Irology Indicators: ators (minimum of o	ne is require					cators (minimum of two required)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	Y Irology Indicators: ators (minimum of o	ne is require	s	alt Crust (B11)	313)		cators (minimum of two required) Surface Soil Cracks (B6)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	Y Irology Indicators: ators (minimum of o	ne is require	s a	alt Crust (B11) quatic Fauna (,		cators <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High ' Satur	Y Irology Indicators: ators (minimum of o ce Water (A1) Water Table (A2) ation (A3)	ne is require	s a H	alt Crust (B11) quatic Fauna (l ydrogen Sulfid	e Odor (C1)		cators (minimum of two required) Surface Soil Cracks (B6)
Depth (inc Remarks: HYDROLOG Wetland Hyc Primary Indic Surfa High Satur Wate	Y Irology Indicators: ators (minimum of o ce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	ne is require	S A D	alt Crust (B11) quatic Fauna (l ydrogen Sulfid ry-Season Wa	e Odor (C1) er Table (C2)	Secondary Indic	cators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin	Irology Indicators: ators (minimum of o ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2)	ne is require	S H D	alt Crust (B11) quatic Fauna (l ydrogen Sulfid ry-Season Wa xidized Rhizosph	e Odor (C1) er Table (C2) eres on Living Roo	Secondary Indic	cators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indio Surfa High Satur Wate Sedin Drift I	Y Irology Indicators: ators (minimum of	ne is require	S H D 0	alt Crust (B11) quatic Fauna (l ydrogen Sulfid ry-Season Wa xidized Rhizosph	e Odor (C1) er Table (C2) eres on Living Roo	Secondary Indic	Cators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Depth (inc Remarks: HYDROLOG Wetland Hyc Primary Indic Surfa High ' Satur Wate Sedin Drift [Algal	Y Irology Indicators: ators (minimum of of of open Water (A1) Water Table (A2) ation (A3) If Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4)	ne is require	S H D 0 (v	alt Crust (B11) quatic Fauna (l ydrogen Sulfid ry-Season Wa' xidized Rhizosph where not tille resence of Rec	e Odor (C1) er Table (C2) eres on Living Roo il)	Secondary Indic	Cators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High ' Satur Wate Sedin Drift [Algal Iron [Y Irology Indicators: ators (minimum of of operation (A1) Water Table (A2) ation (A3) Ir Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)		S H O (v	alt Crust (B11) quatic Fauna (I ydrogen Sulfid- ry-Season Wa' xidized Rhizosph where not tiller resence of Rec hin Muck Surfa	e Odor (C1) er Table (C2) eres on Living Roo i) luced Iron (C4) ce (C7)	Secondary Indic	Cators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) X Geomorphic Position (D2)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund	Y Irology Indicators: ators (minimum of	al Imagery (E	S H O (v	alt Crust (B11) quatic Fauna (l ydrogen Sulfid ry-Season Wa' xidized Rhizosph where not tille resence of Rec	e Odor (C1) er Table (C2) eres on Living Roo i) luced Iron (C4) ce (C7)	Secondary Indic	Cators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) X Geomorphic Position (D2) X FAC-Neutral Test (D5)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate	Y Irology Indicators: ators (minimum of	al Imagery (E	S H O (v	alt Crust (B11) quatic Fauna (I ydrogen Sulfid- ry-Season Wa' xidized Rhizosph where not tiller resence of Rec hin Muck Surfa	e Odor (C1) er Table (C2) eres on Living Roo i) luced Iron (C4) ce (C7)	Secondary Indic	Cators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) X Geomorphic Position (D2)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [Algal Iron [Inund Wate Field Observents	rology Indicators: ators (minimum of of of operations) water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeri r-Stained Leaves (B3) wations:	al Imagery (E	S A A B A B A B A B A B A B A B A B A B	alt Crust (B11) quatic Fauna (I ydrogen Sulfid ry-Season Wa' xidized Rhizosph where not tille resence of Rec hin Muck Surfa ther (Explain ir	e Odor (C1) er Table (C2) eres on Living Roo d) luced Iron (C4) ce (C7) Remarks)	Secondary India	Cators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) X Geomorphic Position (D2) X FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High ' Satur Wate Sedin Drift [Algal Iron [Inund Wate Field Observ Surface Wate	Irology Indicators: ators (minimum of of operation (A1) Water Table (A2) ation (A3) Ir Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aerications: Irresent?	al Imagery (E	S A A A A A A A A A A A A A A A A A A A	alt Crust (B11) quatic Fauna (I ydrogen Sulfid ry-Season War xidized Rhizosph vhere not tiller resence of Rec hin Muck Surfa tther (Explain ir	e Odor (C1) er Table (C2) eres on Living Roo i) luced Iron (C4) ce (C7) Remarks)	Secondary India	Cators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) X Geomorphic Position (D2) X FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [Algal Iron [Inund Wate Field Observ Surface Wate Water Table	Irology Indicators: ators (minimum of of operation (A1) Water Table (A2) ation (A3) Ir Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aerications: Irresent?	al Imagery (E 9)	S S S H D O (v P T C Yes Yes Yes Yes Yes S S Yes	alt Crust (B11) quatic Fauna (I ydrogen Sulfid ry-Season Wa' xidized Rhizosph where not tille resence of Rec hin Muck Surfa ther (Explain ir	e Odor (C1) er Table (C2) eres on Living Roo i) luced Iron (C4) ce (C7) Remarks) Depth (inch-	Secondary India	Cators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) X Geomorphic Position (D2) X FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Determination	on Data Form	- Great Plains Regio	on	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Transportation	· · · · · · ·	State: WY	Sampling Point:	S-37
Investigator(s): R. Newton, D. Soucy		Section,	Township, Range: S12	113N R67W
Landform (hillslope, terrace, etc.): depression	Local Relief (con	ncave, convex, none):	concave	Slope (%): 0
Subregion (LRR): G - Western Great Plains	Lat. 2243	54.274 Long:	744368.3054	Datum: WY E
Soil Map Unit Name: Poposhia-Trimad complex, 3 to 15 percen	t slopes	NW	/I Classification:	UPL
Are climatic/hydrologic conditions on the site typical for this time of	of year? Yes	X No (If i	no, explain in Remarks)
Are Vegetation, Soil, or Hydrologysigni	ficantly disturbed? A	re "Normal Circumstances"	present? Yes	X No
Are Vegetation , Soil , or Hydrology natur	rally problematic?	(If needed, expl	ain any answers in Re	marks.)
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, tra	ansects, important feature	s, etc.	
Hydrophytic Vegetation Present? Yes X No				
Hydric Soil Present? Yes X No	Is the Sar	npled Area within a Wetland	l? Yes	X No
Wetland Hydrology Present? Yes X No			_	
Remarks:				
Remarks.				
Depressional palustrine emergent wetland PEM-12.				
VEGETATION - Use scientific names of plants.				
<u>'</u>	inant Indicator	Dominance Test Worksho	et:	
Tree Stratum (Plot size: 30x30 ft) % Cover Spec		Number of Dominant Spec		
1		That Are OBL, FACW, or F	AC:	2 (A)
2		(excluding FAC-):		
3		Total Number of Dominant		
4	<u> </u>	Species Across All Strata:		2 (B)
5				
0 = Total	Cover	Percent of Dominant Speci		1000/
Sapling/Shrub Stratum (Plot size: 15x15 ft)		That Are OBL, FACW, or F	AC:	100% (A/B)
1		Prevalence Index Worksh	noot:	
3	<u> </u>	Total % Cover o		Multiply by:
4.		OBL species	0 x 1 =	
5.		FACW species	95 x 2 =	
0 = Total		FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)		FACU species	0 x 4 =	0
1. Hordeum jubatum 8	N FACW	UPL species	0 x 5 =	0
2. Distichlis spicata 12	N FACW	Column Totals:	95 (A)	190 (B)
3. Poa palustris 45	Y FACW	Prevale	nce Index = B/A =	2.0
4. Carex praegracilis 30	Y FACW	Hydrophytic Vegetation I		
5			t for Hydrophytic Vege	tation
6		X 2. Dominanc		
[^{7.}	<u> </u>	X 3. Prevalence	e Index is <u><</u> 3.0¹ jical Adaptations¹ (Prov	vido sup
8			in Remarks or on a ser	
9			Hydrophytic Vegetatior	
95 = Total	Cover	TTODICTIALIC	Tydrophytic vegetation	(Explain)
Woody Vine Stratum (Plot size: 30x30 ft)	00101			
1		¹ Indicators of hydric	soil and wetland hydrolo	agy must be
2.			rbed or problematic.	ogy must be
0 = Tot	tal Cover	p. 222.1., 211.1.		
% Bare Ground in Herb Stratum 5 %		Hydrophytic Vegeta	ition Present?	X Yes No
			_	
Remarks:		<u> </u>		

Profile Desc	ription: (Describe t	o the depth	needed to docun	nent the indi	cator or	confirm the absen	ce of indicators.)	
Depth	Matrix			Redox Fea	tures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	10 YR 2/2	100					Sandy Clay	
7-16	10 YR 6/2	97	7.5 YR 5/6	3	С	M	Sandy Clay	
			_					
¹Type: C=Co	oncentration, D=Dep	oletion, RM:	=Reduced Matrix,	CS=Covere	d or Coa	ated Sand Grains.	² Location: PL=P	Pore Lining, M=Matrix
Hydric Soil I	Indicators						Indicator	s for Problematic Hydric Soils ³ :
_ ·	sol (A1)			Sandy (Gleyed N	//atrix (S4)		cm Muck (A9) (LRR I, J)
_	Epipedon (A2)		_		Redox (S		Co	past Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		_		d Matrix	,		ark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)		_			lineral (F1)		gh Plains Depressions (F16)
	fied Layers (A5) (LF	RR F)	_		-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,		_	X Deplete	-			educed Vertic (F18)
	eted Below Dark Sur		_			face (F6)		ed Parent Material (TF2)
	Dark Surface (A12)	, ,	_			Surface (F7)		her (Explain in Remarks)
	y Mucky Mineral (S	,	_			ions (F8)		rs of hydrophylic vegetation and
	m Mucky Peat or Pe	,	RR G, H)		•	oressions (F16)		nydrology must be present, unless
	Mucky Peat or Peat		_			of LRR H)		or problematic.
-			·	•		,	1	
_	_ayer: (if observed)							
Type:								
Depth (inc	nes):						Hydric Soil	Present? Yes X No No
Remarks:								
10/000100	· · · · · · · · · · · · · · · · · · ·							
HYDROLOG								
Ī	drology Indicators:		rad: abook all tha	t annly)		c	oondory Indicators	(minimum of two required)
-	cators (minimum of o	one is requi			4.43	3	econdary indicators	(minimum of two required)
	ce Water (A1)			Salt Crust (B	•			Surface Soil Cracks (B6)
	Water Table (A2)			Aquatic Faur				Sparsley Vegetated Concave Surf. (B8)
	ration (A3)			Hydrogen Su				Drainage Patterns (B10) Oxidized Rhizospheres on Living
	r Marks (B1)			Ory-Season \		` '		Roots (C3) (where tilled)
	nent Deposits (B2)				•	on Living Roots (C3)		Crayfish Burrows (C8)
_	Deposits (B3)		•	where not t	,			. ,
<u> </u>	Mat or Crust (B4)			Presence of		` ,		Saturation Visible on Aerial Imagery (C9)
	Deposits (B5)			Thin Muck S	,	•		Geomorphic Position (D2)
	lation Visible on Aer	0 ,	(B7)(Other (Explai	in in Rer	narks)	X	FAC-Neutral Test (D5)
Wate	r-Stained Leaves (B	39)						Frost-Heave Hummocks (D7) (LRR F)
Field Observ								
Surface Water	er Present?		Yes _			Depth (inches)		Wetland Hydrology
Water Table			Yes _	No		Depth (inches)		Present?
Saturation Pr	resent? (includes ca	pillary fring	e) Yes _	No	X	Depth (inches)		X Yes No
Remarks:								

rtation	City/Count	y: Cheyenne/L	aramie	Sampling Date:	8/1/2019
rtation					0/1/2019
			State: W		S-38
				on, Township, Range: <u>S</u> 1	
	Local Re	lief (concave, co	onvex, none):	none	Slope (%): 0-3
 .	Lat	224363.1718	Long:	744366.3306	Datum: WY E
to 15 percent s				NWI Classification:	UPL
				•	(S)
ysignific	antly disturl	bed? Are "Norm	al Circumstance	es" present? Yes	X No
ynatural	ly problema	ntic?	(If needed, e	explain any answers in R	emarks.)
ing sampling p	oint locati	ons, transects,	important feat	ures, etc.	
No X					
No X	Is	the Sampled Ar	ea within a Wetl	and? Yes	No X
No X					<u> </u>
		1			
575. Sp55.5	o. o.a				1 (A)
				_	(A)
		——	umbar of Damin	ant.	
	_				2 (B)
	_			_	
0 = Total Co	over		- f D 0		
)					50% (A/B)
. /		That 7 th	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		(A/B)
	_	Prevale	nce Index Wor	ksheet:	
					Multiply by:
		OBL			
			•		
0 = Total Co	over				
			•		
65 Y	N		•		
30 Y			•		
					4.1
		Hydrop	hytic Vegetatio	n Indicators:	
		` ` `	1. Rapid 1	Гest for Hydrophytic Veg	etation
			2. Domina	ance Test is >50%.	
			3. Prevale	ence Index is <3.01	
			4. Morpho	ological Adaptations¹ (Pro	ovide sup-
			porting da	ata in Remarks or on a s	eparate sheet)
			Problema	tic Hydrophytic Vegetation	on (Explain)
= Total Co	over				
			¹ Indicators of hy	dric soil and wetland hydro	ology must be
0 = Total	Cover				
%			Hydrophytic Ve	getation Present?	Yes X No
					
		<u> </u>			
	ysignific ynatural ring sampling p No _X No _X No _X No _X Oute Domina Specie O O = Total Co O O	naturally problemating sampling point location No X No X No X Sho X Is O = Total Cover O = Total Cover	y significantly disturbed? Are "Norm y naturally problematic? ring sampling point locations, transects, No X No X No X Is the Sampled Are No X Species? O = Total Cover O = Total Cover FAC FACU UPL Column Hydrop O = Total Cover FAC FACU UPL Column O = Total Cover FAC FACU UPL Column Hydrop O = Total Cover	significantly disturbed? Are "Normal Circumstance ynaturally problematic?	y significantly disturbed? Are "Normal Circumstances" present? Yes naturally problematic? (If needed, explain any answers in Ring sampling point locations, transects, important features, etc. No X Is the Sampled Area within a Wetland? Yes No X Is the Sampled

SOIL								Sampling Point: S-38
Profile Descri	ption: (Describe to	the depth	needed to docur	nent the indica	tor or	confirm the absen	ce of indicators.)	
Depth	Matrix	ino dopin	noodod to dood!	Redox Featu		John In Cascon	oo or manaatoro.,	
(inches)	Color (moist)	%	Color (moist)		ype ¹	Loc ²	Texture	Remarks
0-13	10 YR 2/2	100	Color (moist)	70 .	ypc		clay	Kemarks
13-18	10 YR 6/2	97	7.5 YR 5/6	3	С	M	sand	
10 10	10 111 0/2		7.0 110		<u> </u>		Sund	
¹ Type: C=Con	ncentration, D=Depl	etion, RM=	Reduced Matrix	CS=Covered	or Coa	ated Sand Grains.	² Location: PL=P	Pore Lining, M=Matrix
Hydric Soil In	dicators						Indicator	s for Problematic Hydric Soils ³ :
Histoso	ol (A1)		_	Sandy Gle	eyed N	∕latrix (S4)	1	cm Muck (A9) (LRR I, J)
Histic E	Epipedon (A2)		_	Sandy Re	dox (S	35)	Co	oast Prairie Redox (A16) (LRR F, G, H)
Black I	Histic (A3)		_	Stripped N	Matrix	(S6)	Da	ark Surface (S7) (LRR G)
Hydrog	gen Sulfide (A4)		_	Loamy Mu	ucky N	/lineral (F1)	Hi	gh Plains Depressions (F16)
Stratifie	ed Layers (A5) (LRI	R F)	_	Loamy GI	eyed I	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm M	luck (A9) (LRR F, C	3, H)	_	Depleted	Matrix	(F3)	Re	duced Vertic (F18)
Deplete	ed Below Dark Surf	ace (A11)	_	Redox Da	ark Sur	face (F6)	Re	ed Parent Material (TF2)
Thick D	Dark Surface (A12)		_	Depleted	Dark S	Surface (F7)	Ot	her (Explain in Remarks)
Sandy	Mucky Mineral (S1))	_	Redox De	pressi	ions (F8)	³ Indicato	rs of hydrophylic vegetation and
2.5 cm	Mucky Peat or Pea	at (S2) (LR	R G, H)	High Plair	ns Dep	oressions (F16)		nydrology must be present, unless
5 cm M	lucky Peat or Peat	(S3) (LRR	F)	(MLRA 7	2 & 73	of LRR H)	disturbed	l or problematic.
Restrictive La	yer: (if observed)							
Type:	, , , , , , , , , , , , , , , , , , , ,							
Depth (inche	es):						Hydric Soil	Present? Yes No X
	<u> </u>						, , , , , ,	
Remarks:								
HYDROLOGY								
Wetland Hydr	ology Indicators:							
Primary Indica	tors (minimum of or	ne is requir		4				
Surface	101 1 (0.4)	io io ioquii	red; check all tha	т арріу)		S	econdary Indicators	s (minimum of two required)
.,	e Water (A1)	10 10 10quii		τ <i>appιy)</i> Salt Crust (B11	1)	S	econdary Indicators	s (minimum of two required) Surface Soil Cracks (B6)
High W	e Water (A1) /ater Table (A2)	io io roquii	;		•		econdary Indicators	, ,
	` '	10 10 10 quii	;	Salt Crust (B11	(B13)		econdary Indicators	Surface Soil Cracks (B6)
Saturat	/ater Table (A2)	10 10 10 qui	; ;	Salt Crust (B11 Aquatic Fauna	(B13) de Od	or (C1)	econdary Indicators	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Saturat Water I	/ater Table (A2) tion (A3)	10 10 10 qui		Salt Crust (B11 Aquatic Fauna Hydrogen Sulfi Dry-Season W	(B13) de Od ater Ta	or (C1)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Saturat Water I	/ater Table (A2) tion (A3) Marks (B1)	10 10 10quii		Salt Crust (B11 Aquatic Fauna Hydrogen Sulfi Dry-Season W	(B13) de Od ater Ta	or (C1) able (C2)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Saturat Water I Sedime	Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)	10 10 10 44411		Salt Crust (B11 Aquatic Fauna Hydrogen Sulfi Dry-Season W Oxidized Rhizosp	(B13) de Od ater Ta pheres o	or (C1) able (C2) on Living Roots (C3)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Saturat Water I Sedime Drift De	/ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	10 10 10 44411		Salt Crust (B11 Aquatic Fauna Hydrogen Sulfi Dry-Season W Oxidized Rhizosp (where not till	(B13) de Od ater Ta bheres ed)	or (C1) able (C2) on Living Roots (C3) d Iron (C4)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Saturat Water I Sedime Drift De Algal M	Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4)			Salt Crust (B11 Aquatic Fauna Hydrogen Sulfi Dry-Season W Oxidized Rhizosp (where not till Presence of Re	(B13) de Od ater Ta pheres o ed) educed face (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Saturat Water I Sedime Drift De Algal M Iron De	Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5)	al Imagery		Salt Crust (B11 Aquatic Fauna Hydrogen Sulfi Dry-Season W. Oxidized Rhizosp (where not till Presence of Re Thin Muck Surf	(B13) de Od ater Ta pheres o ed) educed face (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Saturat Water I Sedime Drift De Algal M Iron De Inunda: Water-	Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) And or Crust (B4) eposits (B5) tion Visible on Aeria Stained Leaves (B5)	al Imagery		Salt Crust (B11 Aquatic Fauna Hydrogen Sulfi Dry-Season W. Oxidized Rhizosp (where not till Presence of Re Thin Muck Surf	(B13) de Od ater Ta pheres o ed) educed face (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Saturat Water I Sedime Drift De Algal M Iron De Inunda Water-	Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Vat or Crust (B4) eposits (B5) tion Visible on Aeria Stained Leaves (B9 ations:	al Imagery	(B7)	Salt Crust (B11 Aquatic Fauna Hydrogen Sulfi Dry-Season W Oxidized Rhizosp (where not till Presence of Re Thin Muck Surl Other (Explain	(B13) de Od ater Ta pheres e ed) educed face (C in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Saturat Water I Sedime Drift De Algal M Iron De Inundar Water- Field Observa Surface Water	Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria Stained Leaves (B5 ations:	al Imagery		Salt Crust (B11 Aquatic Fauna Hydrogen Sulfi Dry-Season W Oxidized Rhizosp (where not till Presence of Re Thin Muck Surf Other (Explain	(B13) de Od ater Ta pheres o ed) educed face (C in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Saturat Water I Sedime Drift De Algal M Iron De Inunda: Water-: Field Observa Surface Water Water Table P	Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria Stained Leaves (B5 ations:	al Imagery 3)	(B7) Yes Yes	Salt Crust (B11 Aquatic Fauna Hydrogen Sulfi Dry-Season W Oxidized Rhizosp (where not till Presence of Re Thin Muck Surl Other (Explain	(B13) de Od ater Ta oheres o ed) educed face (C in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology

Wetland Determina	tion Data Form	ı - Great Plains Regi	on	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Transportation		State: WY	Sampling Point:	S-39
Investigator(s): R. Newton, D. Soucy		Section	, Township, Range: S1	1 T13N R67W
Landform (hillslope, terrace, etc.): depression	Local Relief (co	ncave, convex, none):	concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	Lat. 22407	71.7792 Long:	743814.9568	Datum: WY E
Soil Map Unit Name: Poposhia-Trimad complex, 3 to 15 per	cent slopes	N ¹	WI Classification:	UPL
Are climatic/hydrologic conditions on the site typical for this tin	ne of year? Yes	X No(It	^f no, explain in Remarks	s)
Are Vegetation , Soil , or Hydrology si	gnificantly disturbed? A	re "Normal Circumstances'	present? Yes	X No
Are Vegetation , Soil , or Hydrology na	aturally problematic?	(If needed, exp	olain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map showing samp	ling point locations, tr	ansects, important featur	es, etc.	
Hydrophytic Vegetation Present? Yes X No		-		
Hydric Soil Present? Yes No X	Is the Sar	mpled Area within a Wetlar	nd? Yes	No X
Wetland Hydrology Present? Yes X No		•	-	
Remarks:				
Depressional area with dominant hydrophytic vegetation and v	vetland hydrology but la	cking hydric soils.		
VEGETATION - Use scientific names of plants.		1		
	Oominant Indicator	Dominance Test Worksh		
Tree Stratum (Plot size: 30x30 ft) % Cover S	Species? Status	Number of Dominant Spe That Are OBL, FACW, or		1 (4)
1		(excluding FAC-):		1 (A)
3.				
4.		Total Number of Dominan Species Across All Strata		1 (B)
5.		opeoles / toross / till etrata	· —	1 (5)
	otal Cover	Percent of Dominant Spec	cies	
Sapling/Shrub Stratum (Plot size: 15x15 ft)		That Are OBL, FACW, or		100% (A/B)
1.				
2.	<u> </u>	Prevalence Index Works	sheet:	
3.		Total % Cover	of:	Multiply by:
4.		OBL species	87 x 1 =	87
5.		FACW species	4 x 2 =	8
0 = Tc	otal Cover	FAC species	0 x 3 =	= 0
Herb Stratum (Plot size: 5x5 ft)		FACU species	0 x 4 =	= 0
1. Eleocharis palustris 87	Y OBL	UPL species	0 x 5 =	0
2. Hordeum jubatum 4	N FACW	Column Totals:	91 (A)	95 (B)
3			ence Index = B/A =	1.0
4		Hydrophytic Vegetation		
5			st for Hydrophytic Vege	etation
6			ce Test is >50%.	
7			ce Index is <3.01	
8		· ·	ogical Adaptations¹ (Pro in Remarks or on a se	•
9				
10	otal Cover	Problematic	: Hydrophytic Vegetatio	n (Explain)
	nai Covei			
Woody Vine Stratum (Plot size: 30x30 ft)		1		
2			ic soil and wetland hydrol	logy must be
0 =	Total Cover	present, unless dis	turbed or problematic.	
% Bare Ground in Herb Stratum 9 %	i otai Govei	Hydrophytic Vege	tation Present?	X Yes No
70 Jane Stouria III Floris Guatarii		inyarophytic vege	-	N
Remarks:				

SOIL

Sampling Point: S-39

	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10 YR 3/2	100					Sandy Clay	some road fill
3-5	10 YR 5/2	100					Sandy Clay	
5-18	10 YR 8/1	100					Sand	
	·							
			,					
	·		,					
			,					
¹ Type: C=Ce	oncentration, D=Dep	letion, RM=l	Reduced Matrix,	CS=Cove	red or Coa	ted Sand Grains.	² Location: PL	=Pore Lining, M=Matrix
Hydric Soil	Indicators						Indica	tors for Problematic Hydric Soils ³ :
Histo	sol (A1)		_	Sandy	Gleyed M	latrix (S4)		1 cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)		_	Sandy	Redox (S	5)		Coast Prairie Redox (A16) (LRR F, G, H)
Black	(Histic (A3)		_	Stripp	ed Matrix ((S6)		Dark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)		_	Loamy	y Mucky M	ineral (F1)		High Plains Depressions (F16)
Strati	fied Layers (A5) (LR	RF)	_	Loamy	y Gleyed M	Matrix (F2)	<u> </u>	(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F, 6	G, H)	_	Deple	ted Matrix	(F3)		Reduced Vertic (F18)
Deple	eted Below Dark Surf	face (A11)	_	Redox	d Dark Surf	face (F6)		Red Parent Material (TF2)
Thick	Dark Surface (A12)		_	Deple	ted Dark S	surface (F7)		Other (Explain in Remarks)
Sand	y Mucky Mineral (S1)	_	Redox	c Depression	ons (F8)	³ Indica	itors of hydrophylic vegetation and
2.5 c	m Mucky Peat or Pea	at (S2) (LRF	R G, H)	High F	Plains Dep	ressions (F16)		d hydrology must be present, unless
5 cm	Mucky Peat or Peat	(S3) (LRR I	F)	(MLI	RA 72 & 73	of LRR H)	disturb	ped or problematic.
3 (111		` , `						
Restrictive I	Layer: (if observed)							
Restrictive I	Layer: (if observed)	. , , ,					Hydric S	oil Present? Yes No X
Restrictive I Type: Depth (inc	Layer: (if observed)						Hydric S	oil Present? Yes No _>
Restrictive I Type: Depth (inc	Layer: (if observed)						Hydric S	oil Present? Yes No >
Restrictive I Type: Depth (inc	Layer: (if observed)						Hydric S	oil Present? Yes No >
Restrictive I Type: Depth (inc Remarks:	Layer: (if observed)						Hydric S	oil Present? Yes No _>
Restrictive I Type: Depth (inc) Remarks: HYDROLOG	Layer: (if observed) ches): GY drology Indicators:							
Restrictive I Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd	Layer: (if observed) shes): Y drology Indicators: cators (minimum of o			,		s		ors (minimum of two required)
Restrictive I Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic.	Layer: (if observed) Shes): GY drology Indicators: cators (minimum of o		;	Salt Crust (,	S		ors (<i>minimum of two required</i>) Surface Soil Cracks (B6)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indid Surfa High	Layer: (if observed) thes): drology Indicators: cators (minimum of o			Salt Crust (Aquatic Fau	una (B13)			ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary India Surfa High Satur	ches): GY drology Indicators: cators (minimum of o			Salt Crust (Aquatic Fau Hydrogen S	una (B13) Sulfide Odd	or (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Adver: (if observed) Shes): GY drology Indicators: cators (minimum of			Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor	una (B13) Sulfide Odo n Water Ta	or (C1) able (C2)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary India High Satur Wate Sedir	ches): drology Indicators: cators (minimum of			Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Oxidized Rhii	una (B13) Sulfide Odd n Water Ta zospheres o	or (C1)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift	ches): GY drology Indicators: cators (minimum of			Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhi where not	una (B13) Sulfide Odd n Water Ta zospheres o	or (C1) able (C2) on Living Roots (C3)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	Adrology Indicators: cators (minimum of orace Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)			Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhiz Where not Presence o	una (B13) Sulfide Odd n Water Ta zospheres o tilled) f Reduced	or (C1) hble (C2) on Living Roots (C3) I Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indid Surfa High Satur Wate Sedir Drift I Algal Iron I	ches): drology Indicators: cators (minimum of	ne is require		Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhi where not Presence of Thin Muck	una (B13) Sulfide Odo n Water Ta zospheres o tilled) of Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	ches): drology Indicators: cators (minimum of o nee Water (A1) Water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aeri	ne is require		Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhiz Where not Presence o	una (B13) Sulfide Odo n Water Ta zospheres o tilled) of Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	ches): drology Indicators: cators (minimum of	ne is require		Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhi where not Presence of Thin Muck	una (B13) Sulfide Odd Nuter Ta zospheres o tilled) of Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	ches): drology Indicators: cators (minimum of	ne is require		Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhi where not Presence of Thin Muck	una (B13) Sulfide Odd Nuter Ta zospheres o tilled) of Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	Layer: (if observed) Shes): GY drology Indicators: cators (minimum of or	ne is require		Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhi where not Presence of Thin Muck	una (B13) Sulfide Odo n Water Ta zospheres o tilled) of Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Layer: (if observed) ches): drology Indicators: cators (minimum of	ne is require	(B7)	Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Dxidized Rhiz Where not Presence o Thin Muck S Dther (Expl	una (B13) Sulfide Odo Nater Ta zospheres o tilled) of Reduced Surface (C lain in Rem	or (C1) hble (C2) on Living Roots (C3) l Iron (C4) c7) narks)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Dete	ermination Data I	Form - Great Plains R	egion	
Project/Site: I-25/I-80 Interchange	City/Coun	ty: Cheyenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Transpor	tation	State: V	VY Sampling Point:	S-40
Investigator(s): R. Newton, D. Soucy		Sec	tion, Township, Range: S1	1 T13N R67W
Landform (hillslope, terrace, etc.): depression	Local Re	elief (concave, convex, none):	minor concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	Lat.	223977.5752 Long	: 743424.317	Datum: WY E
Soil Map Unit Name: <u>Urban land-Merden complex,</u>	0 to 3 percent slopes		NWI Classification:	UPL
Are climatic/hydrologic conditions on the site typical f	for this time of year?	Yes X No	(If no, explain in Remark	s)
Are Vegetation, Soil, or Hydrology	/significantly distur	bed? Are "Normal Circumstan	ces" present? Yes	X No
Are Vegetation , Soil , or Hydrology	naturally problema	atic? (If needed,	explain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map showi	ng sampling point locati	ons, transects, important fea	atures, etc.	
	No			
Hydric Soil Present? Yes N	lo X	the Sampled Area within a We	etland? Yes	No X
Li		'	-	
Remarks:				
Depressional group with deminant budget but	tion and watland budgets	v but looking budgin:!-		
Depressional area with dominant hydrophytic vegeta	uon and wetland hydrolog	y but lacking nydric solls.		
VEGETATION - Use scientific names of plants.		<u> </u>		
Absort		Dominance Test Workitus Number of Dominant S		
1 (1 lot 3/26	очен ореоноз: он	That Are OBL, FACW	•	2 (A)
2		(excluding FAC-):		
3.		Total Number of Domi	nant	
4.		Species Across All Str		3 (B)
5.		 `		
Sapling/Shrub Stratum (Plot size: 15x15 ft 1.	Total Cover	Percent of Dominant S That Are OBL, FACW	•	67% (A/B)
2		Prevalence Index Wo	orksheet:	
3		Total % Cov		Multiply by:
4		OBL species	15 x 1 =	
5		FACW species	25 x 2 =	
Ularib Christians (Diet size)	Total Cover	FAC species	0 x 3 =	
Herb Stratum (Plot size: 5x5 ft)	F V FA	FACU species CW UPL species	20 x 4 = 0 x 5 =	
1. Juncus compressus 29 2. Elymus repens 20		CU UPL species CU Column Totals:		
2. Elymus repens 20 3. Puccinellia nuttalliana 19			60 (A) evalence Index = B/A =	145 (B) 2.4
4.		Hydrophytic Vegetat		2.4
5.			Test for Hydrophytic Vege	etation
6.			nance Test is >50%.	
7.			elence Index is <3.01	
8. 9.		4. Morpl	– nological Adaptations¹ (Pro data in Remarks or on a se	
10.		Problem	atic Hydrophytic Vegetatio	n (Explain)
60	0 = Total Cover	<u> </u>		(/
Woody Vine Stratum (Plot size: 30x30 ft)				
1.		¹ Indicators of h	nydric soil and wetland hydro	logy must be
2.			s disturbed or problematic.	loby must be
0	= Total Cover	,, ,		
% Bare Ground in Herb Stratum 40	%	Hydrophytic V	egetation Present?	X YesNo
Remarks:				

SOIL

Sampling Point: S-40

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Redox Features Depth (inches) Loc² Color (moist) Color (moist) Texture Type³ Remarks 0-6 10 YR 2/1 67 Clay Loam 25% road fill 10 YR 3/1 33 Clay Loam 6-18 10 YR 6/3 100 Sandy Clay ²Location: PL=Pore Lining, M=Matrix ¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Hydric Soil Indicators Indicators for Problematic Hydric Soils³: Histosol (A1) Sandy Gleyed Matrix (S4) 1 cm Muck (A9) (LRR I, J) Histic Epipedon (A2) Sandy Redox (S5) Coast Prairie Redox (A16) (LRR F, G, H) Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR G) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) (LRR H outside of MLRA 72 & 73) 1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F3) Reduced Vertic (F18) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Red Parent Material (TF2) Depleted Dark Surface (F7) Thick Dark Surface (A12) Other (Explain in Remarks) Sandy Mucky Mineral (S1) Redox Depressions (F8) ³Indicators of hydrophylic vegetation and 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) wetland hydrology must be present, unless disturbed or problematic. 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) Restrictive Layer: (if observed) Type: Depth (inches): No X **Hydric Soil Present?** Yes Remarks: **HYDROLOGY** Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Surface Water (A1) Salt Crust (B11) X Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Sparsley Vegetated Concave Surf. (B8) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Oxidized Rhizospheres on Living Water Marks (B1) Dry-Season Water Table (C2) Roots (C3) (where tilled) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Crayfish Burrows (C8) Drift Deposits (B3) (where not tilled) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Depth (inches) Yes No Х **Wetland Hydrology** Present? Water Table Present? Depth (inches) No Χ Saturation Present? (includes capillary fringe) Depth (inches) X Yes Х No No Yes Remarks:

Applicant Downer Wyoming Dept. of Transportation Selate: WY Section Township Again Selate	Wetland Determinati	on Data Form	- Great Plains Regi	on	
Machinghore	Project/Site: I-25/I-80 Interchange	City/County: Chey	yenne/Laramie	Sampling Date:	8/1/2019
Local Relief (conceive, convex, none); Conceive, Slope (%); O.3		_ · · · <u> </u>	· · · · · · · · · · · · · · · · · · ·	Sampling Point:	S-41
Subtraction (LRR):	Investigator(s): R. Newton, D. Soucy		Section,	Township, Range: S2	T13N R67W
Note Communication Soil May Unit Name:	Landform (hillslope, terrace, etc.): depression	Local Relief <i>(cor</i>	ncave, convex, none):	concave	Slope (%): 0-3
Are climatic hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Ave Vegetation Soil or Hydrology in aturally problematic? Are Vegetation Soil or Hydrology in a turally problematic? BUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrolypic Vegetation Present? Yes X No Hydrology Present? Yes X No Absolute Begravity of Presents of Plants. Peressional palustrine emergent wetland PEM-13. VEGETATION - Use scientific names of plants. Press Stratum (Plot size: 30x30 ft) % Covert Species? Status Brain Absolute Dominant Indicator Species Trea Stratum (Plot size: 30x30 ft) % Covert Species? Status Brain Absolute Dominant Indicator Species That Are OBL, FACW, or FAC: 1 (A) (excluding FAC): 1 (B)	Subregion (LRR): G - Western Great Plains	Lat. 22654	5.3917 Long:	743906.1199	Datum: WY E
Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X Novare Vegetation Soil or Hydrology naturally problemate? (If needed, explain any answers in Remarks.) Wespeciation Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Wetland Hydrology Present? Yes X No Description of Present? Yes X No Secretary No. **Prevention Hydrology Present? Yes X No Secretary No. **Prevalence Index Worksheet: 1 (A) (excluding FAC): 1 (A) (excluding F	Soil Map Unit Name: Urban land-Evanston complex, 0 to 6 per	rcent slopes	NV	VI Classification:	UPL
Subminance Soil	Are climatic/hydrologic conditions on the site typical for this time	of year? Yes	X No(If	no, explain in Remarks)
SUMMARY OF FINDINGS - Attach site was proving sampling point locations, transects, important features, etc. Hydrophylic Vegetation Present? Yes X No Wetland Hydrology Present? Yes X No No No Wetland Hydrology Present? No N	Are Vegetation, Soil, or Hydrologysign	nificantly disturbed? Ar	e "Normal Circumstances"	present? Yes	X No
Hydric Vegetation Present? Yes X No No Is the Sampled Area within a Wetland? Yes X No No Notical Hydrology Present? Yes X No Notical Hydrology Present? Yes X No No Notical Hydrology Present? Yes X No No Notical Hydrology Present? Yes X No Notical Hydrology Present. Yes X No Notical Hydrology Present? Yes X No Notical Hydrology Present. Yes	Are Vegetation , Soil , or Hydrology natu	urally problematic?	(If needed, exp	lain any answers in Re	marks.)
Is the Sampled Area within a Wetland? Yes X No No No No No No No	SUMMARY OF FINDINGS - Attach site map showing samplin	ng point locations, tra	ansects, important feature	es, etc.	
Remarks:	Hydrophytic Vegetation Present? Yes X No				
Compressional palustrine emergent wetland PEM-13. VEGETATION - Use scientific names of plants. Species Status Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) (A)	Hydric Soil Present? Yes X No	Is the San	npled Area within a Wetlan	d? Yes	X No
Depressional palustrine emergent wetland PEM-13. Depressional palustrine emergent wetland PEM-13.	Wetland Hydrology Present? Yes X No			_	
Depressional palustrine emergent wetland PEM-13. Depressional palustrine emergent wetland PEM-13.	Damarka:				
Absolute Dominant Species Species Species Status Species Spe	Remarks:				
Absolute Dominant Species Species Species Status Species Spe	Depressional palustrine emergent wetland PEM-13.				
Dominant Species					
Number of Dominant Species	•	minant Indicator	Dominance Test Worksh	eet:	
Total Number of Dominant Species Across All Strata: 1 (8) 5.	1	<u> </u>		AC:	1 (A)
Species Across All Strata: 1 (B)	2		(excluding FAC-):		
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)	3			:	
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)	4		Species Across All Strata:		1 (B)
Saping/Shrub Stratum (Plot size: 15x15 ft) 1.	5				
Prevalence Index Worksheet:		al Cover	•		4000/
Total % Cover of: Multiply by: A	Sapling/Shrub Stratum (Plot size: 15x15 ft)		That Are OBL, FACW, or I	-AC:	100% (A/B)
Total % Cover of: Multiply by: A	<u></u>		Drovolonoo Indox Worke	hoot	
OBL species 85 x 1 = 85 FACW species 0 x 2 = 0 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 OBL species	3				Multiply by:
FACW species 0 x 2 = 0	4.				-
Column FAC Species D X 3 = D	5.		•		
FACU Species	0 = Tota			0 x 3 =	0
2. Typha latifolia 10 N OBL Prevalence Index = B/A = 1.0 Hydrophytic Vegetation Indicators: X 1. Rapid Test for Hydrophytic Vegetation X 2. Dominance Test is >50%. X 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 85 = Total Cover Moody Vine Stratum (Plot size: 30x30 ft) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Herb Stratum (Plot size: 5x5 ft)		FACU species	0 x 4 =	0
Prevalence Index = B/A = 1.0	1. Eleocharis palustris 75	Y OBL	UPL species	0 x 5 =	0
Hydrophytic Vegetation Indicators: X 1. Rapid Test for Hydrophytic Vegetation X 2. Dominance Test is >50%. X 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 85 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1.	2. Typha latifolia 10	N OBL	Column Totals:	85 (A)	85 (B)
X 1. Rapid Test for Hydrophytic Vegetation X 2. Dominance Test is >50%. X 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 85 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1.	3		Prevale	ence Index = B/A =	1.0
X 2. Dominance Test is >50%. X 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) D Problematic Hydrophytic Vegetation (Explain) Noody Vine Stratum (Plot size: 30x30 ft) 1. 1 1 1 1 1 1 1 1 1	4				
X 3. Prevalence Index is \(\leq 3.0^1 \)	5				tation
4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 85 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1.	6				
porting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 85 = Total Cover Moody Vine Stratum (Plot size: 30x30 ft) 1.	7			_	vide sun-
Problematic Hydrophytic Vegetation (Explain) 85 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1.					
85 = Total Cover	lo.				
Moody Vine Stratum (Plot size: 30x30 ft) 1.		al Cover		Trydrophytic vegetation	(Explain)
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1					
present, unless disturbed or problematic. 0 = Total Cover	1		¹ Indicators of hydri	s soil and wotland budgels	any must be
0 = Total Cover	2.		•	•	ogy must be
% Bare Ground in Herb Stratum 15 % Hydrophytic Vegetation Present? X Yes No	0 = To	otal Cover	p. 220, 220		
	<u> </u>		Hydrophytic Veget	ation Present?	X Yes No
				-	
Remarks:	Remarks:				

Depth	Matrix		F	Redox Feature	es			
(inches)	Color (moist)	% (Color (moist)	% Typ	pe ¹	Loc ²	Texture	Remarks
0-0.5	10 YR 2/1	100					muck	
0.5-2	10YR 3/1	100					sand	
2-8	10 YR 2/1	100					clay	
8-12	10 YR 3/2	100					clay	
12-16	10 YR 3/1	100					clay	
¹ Type: C=Ce	oncentration, D=Dep	letion, RM=R	educed Matrix, C	S=Covered or	Coated S	Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil	Indicators						Indicato	ors for Problematic Hydric Soils ³ :
Histo	osol (A1)			Sandy Gley	ed Matrix	(S4)	1	. cm Muck (A9) (LRR I, J)
Histic	c Epipedon (A2)			Sandy Red	ox (S5)			Coast Prairie Redox (A16) (LRR F, G, H)
Black	k Histic (A3)			Stripped Ma	atrix (S6)			Park Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)			Loamy Muc	ky Minera	al (F1)	+	ligh Plains Depressions (F16)
	ified Layers (A5) (LR	,		Loamy Gley	ed Matrix	(F2)		(LRR H outside of MLRA 72 & 73)
X 1 cm	Muck (A9) (LRR F,	G , H)		Depleted M	atrix (F3)		R	Reduced Vertic (F18)
	eted Below Dark Sur	` ,		Redox Dark	Surface	(F6)	R	Red Parent Material (TF2)
	k Dark Surface (A12)			Depleted Da		` '		Other (Explain in Remarks)
	dy Mucky Mineral (S1	-		Redox Depi				ors of hydrophylic vegetation and
	m Mucky Peat or Pe			High Plains				I hydrology must be present, unless ed or problematic.
5 cm	Mucky Peat or Peat	(S3) (LRR F)		(MLRA 72	& 73 of LR	к н)		
Restrictive I	Layer: (if observed)							
Type:								
Depth (inc	ches):						Hydric So	il Present? Yes X No
Remarks:								
HYDROLOG	SY .							
Wetland Hy	drology Indicators:							
Primary Indic	cators (minimum of c	one is required	l; check all that a	pply)		Se	econdary Indicato	rs (minimum of two required)
Surfa	ace Water (A1)		Sa	It Crust (B11)			X	Surface Soil Cracks (B6)
High	Water Table (A2)		Aq.	uatic Fauna (E	313)			Sparsley Vegetated Concave Surf. (B8)
Satur	ration (A3)		Hy	drogen Sulfide	Odor (C	1)		Drainage Patterns (B10)
Wate	er Marks (B1)		Dry	/-Season Wat	er Table (C2)		Oxidized Rhizospheres on Living
Sedir	ment Deposits (B2)		Oxi	dized Rhizosphe	eres on Liv	ing Roots (C3)		Roots (C3) (where tilled)
Drift I	Deposits (B3)		(wl	here not tilled	d)			Crayfish Burrows (C8)
X Algal	Mat or Crust (B4)		Pre	esence of Red	uced Iron	(C4)		Saturation Visible on Aerial Imagery (C9)
	Deposits (B5)			n Muck Surfa	ce (C7)		X	Geomorphic Position (D2)
Inunc	dation Visible on Aer	ial Imagery (B	7)Oth	ner (Explain in	Remarks	5)	X	FAC-Neutral Test (D5)
Wate	er-Stained Leaves (B	9)						Frost-Heave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Wat	ter Present?		Yes	No X	Deptl	n (inches)		Wetland Hydrology
Water Table	Present?		Yes	No X	Deptl	n (inches)		Present?
Saturation P	resent? (includes ca	pillary fringe)	Yes	No X	Deptl	n (inches)		X Yes No
Remarks:								

Applicant/Owner Wyoming Depk. of Transportation Slate WY Sampling Point S-42 Investigator(s) R. Newton, D. Souty	Wetland	Determinatio	n Data Fori	n - Great Plains Regio	n	
Investigator(s): R. Newton, D. Sourcy	Project/Site: I-25/I-80 Interchange		City/County: Ch	neyenne/Laramie	Sampling Date:	8/1/2019
Landform (nillslope, terrace, etc.) minor slope	Applicant/Owner: Wyoming Dept. of Tra	ansportation		State: WY	Sampling Point:	S-42
Daminance Companies Subvergion Life	Investigator(s): R. Newton, D. Soucy			Section, T	ownship, Range: S2	T13N R67W
Soli Map Unit Name	Landform (hillslope, terrace, etc.): minor s	slope	Local Relief (d	concave, convex, none): no	one	Slope (%): 0-1
Are climatichydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation Soil or Hydrology and Intelligent Soil or Hydrology and Provide Soil or Hydrology (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transacts, important features, etc. Hydrolopivic Vegetation Present? Yes No X Wetland Hydrology Present? Yes No X No Ministry Hydrology Present? Yes No X No Wetland Hydrology Present? Yes No X No Mythids Wetland? Yes No Y	Subregion (LRR): G - Western Great Pla	ins	Lat. 226	546.0379 Long:	743900.1836	Datum: WY E
Are Vegetation	Soil Map Unit Name: Urban land-Evanston o	complex, 0 to 6 perc	ent slopes	NWI	Classification:	UPL
Are Vegetation	Are climatic/hydrologic conditions on the site t	typical for this time o	f year? Ye	es X No (If no	o, explain in Remarks)
Are Vegetation	Are Vegetation Soil or Hy	drology signit	icantly disturbed?	Are "Normal Circumstances" p	resent? Yes	X No
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophylic Vegetation Present? Yes No X Welland Hydrology Present? Yes X No X Welland Hydrology Present? Yes No X Welland Hydrology Present? Yes X No X Welland Hydrology Must be present, unless disturbed or problematic.	<u> </u>		-			
Hydrophytic Vagetation Present? Yes			• •			marks.)
Prevalence Index Morkshoet:	-		point locations,	transects, important leatures	, etc.	
No X X No X X No X X No X	' ' ' ' -					
Paired upland point for PEM-13.	_ _		Is the S	ampled Area within a Wetland's	Yes_	No X
Paired upland point for PEM-13. VEGETATION - Use scientific names of plants. Indicator Species Status Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) (excluding FAC-): (exclu	Wetland Hydrology Present? Yes	No_X				
Name	Remarks:					
Dominant Species Spe	Paired upland point for PEM-13.					
Number of Dominant Species	VEGETATION - Use scientific names of pla	nts.		_		
That Are OBL, FACW, or FAC: 0 (A) (excluding FAC): Total Number of Dominant Species Across All Strata: 1 (B) Sapiling/Shrub Stratum (Plot size: 15x15 ft) Sapiling/Shrub Stratum (Plot size: 5x5 ft) Sapiling/Shrub Stratum (Plot size:	Tree Chrotisms (Plat sizes 20):20 ft					
Comparison Com	Tree Stratum (Plot size)	% Cover Spec	ies? Status			0 (0)
Total Number of Dominant Species Across All Strata: 1 (B)	1					(A)
Species Across All Strata: 1 (8)	2					
Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)	3					4 (5)
D	4			Species Across Ali Strata:		(B)
Saping/Shrub Stratum (Plot size: 15x15 ft) 1.	5					
1	Continue/Charle Street use (Diet sine)		Cover	·		00/ (4/5)
Total % Cover of:	Sapiing/Shrub Stratum (Plot size: 15x1	15π)		That Are OBL, FACW, or FA	····	(A/B)
Total % Cover of:	1			Donald and Lader Made ha	4-	
A	2					Multiply by
FACW species D x 2 = D D D D D D D D D D	3					
Herb Stratum (Plot size: 5x5 ft) 1. Bromus inermis 12 N UPL 2. Poa pratensis 78 Y FACU 352 12 X 5 = 60 10 N FACU 10 N F	4			'		
Herb Stratum (Plot size: 5x5 ft) 1. Bromus inermis 12 N UPL	5			'		
1. Bromus inermis 12 N UPL UPL species 12 x 5 = 60 60 412 x 5 = 60 70 70 <th< td=""><td>Harb Stratum (Diet size) 5.05 ft</td><td> = Total</td><td>Cover</td><td>· ·</td><td></td><td></td></th<>	Harb Stratum (Diet size) 5.05 ft	= Total	Cover	· ·		
2. Poa pratensis 3. Cirsium arvense 10 N FACU Hydrophytic Vegetation Indicators: 1. Rapid Test for Hydrophytic Vegetation 2. Dominance Test is >50%. 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 1. Problematic Hydrophytic Vegetation 2. Dominance Test is >50%. 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 1. Problematic Hydrophytic Vegetation (Explain) 1. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No		40	ı upı	· ·		
3. Cirsium arvense 10 N FACU Prevalence Index = B/A = 4.1 Hydrophytic Vegetation Indicators: 1. Rapid Test for Hydrophytic Vegetation 2. Dominance Test is >50%. 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 100 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1				'		
Hydrophytic Vegetation Indicators: 1. Rapid Test for Hydrophytic Vegetation 2. Dominance Test is >50%. 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) porting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 1. Problematic Hydrophytic Vegetation (Explain) 1. Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. We Bare Ground in Herb Stratum 0 % Bare Ground in Herb Stratum 7 Yes X No					`	
1. Rapid Test for Hydrophytic Vegetation 2. Dominance Test is >50%. 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) porting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 100 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1.	<u> </u>	10 N	FACU		•	4.1
2. Dominance Test is >50%. 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 100 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1.						4
3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) porting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 1.						ation
8. 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) 9. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7.						
porting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 100 = Total Cover Woody Vine Stratum (Plot size: 30x30 ft) 1.					_	ido oun
Problematic Hydrophytic Vegetation (Explain) 100						
Total Cover Woody Vine Stratum (Plot size: 30x30 ft)	9					
Moody Vine Stratum (Plot size: 30x30 ft) 1.	lo			Problematic H	ydrophytic Vegetation	ı (Explain)
1			Cover			
2. present, unless disturbed or problematic. 0 = Total Cover 8 Bare Ground in Herb Stratum 0 % Hydrophytic Vegetation Present? Yes X No	Woody Vine Stratum (Plot size: 30x30	<u>ft</u>)				
### Description of the stratum of th	1			¹ Indicators of hydric s	soil and wetland hydrolo	ogy must be
% Bare Ground in Herb Stratum 0 % Hydrophytic Vegetation Present? Yes X No	2			present, unless distur	bed or problematic.	
	_		al Cover			
Remarks:	% Bare Ground in Herb Stratum	<u></u> %		Hydrophytic Vegetat	ion Present?	Yes X No
Remarks:						
	Remarks:					

Depth	Matrix			Redox Fe	atures			
(inches)	Color (moist)	% (Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	10 YR 2/1	100					Clay	-
								-
		,						-
								-
¹ Type: C=Co	oncentration, D=Dep	letion RM=R	Reduced Matrix	CS=Cover	ed or Coa	ated Sand Grains	² l ocation: Pl	_=Pore Lining, M=Matrix
Hydric Soil I	<u> </u>							ators for Problematic Hydric Soils ³ :
•	sol (A1)			Sandy	Gleved N	Matrix (S4)	marce	1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		_		ed Matrix	,		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)		_			(50) Ineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LR	D E\	_		•	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, (,	_		ed Matrix			
	eted Below Dark Surf		_			face (F6)		Reduced Vertic (F18) Red Parent Material (TF2)
	Dark Surface (A12)		_			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S1		_		Depressi	` '	2 .	-
	y widcky willeral (O i	,	_			oressions (F16)		ators of hydrophylic vegetation and nd hydrology must be present, unless
	m Mucky Peat or Pe	at (S2) (I RR	C H)			// C3310113 (1 10 <i>)</i>	WELIA	na nyarology mast be present, amess
2.5 cm	n Mucky Peat or Peat		_				distur	bed or problematic.
2.5 cm	m Mucky Peat or Peat Mucky Peat or Peat		_			of LRR H)	distur	bed or problematic.
2.5 cm	-		_				distur	bed or problematic.
2.5 cm 5 cm Restrictive L Type:	Mucky Peat or Peat		_				distur	bed or problematic.
2.5 cm 5 cm	Mucky Peat or Peat		_					bed or problematic. Soil Present? Yes No X
2.5 cm 5 cm Restrictive L Type:	Mucky Peat or Peat		_					
2.5 cm 5 cm Type: Depth (incl	Mucky Peat or Peat		_					
2.5 cm 5 cm Type: Depth (incl	Mucky Peat or Peat .ayer: (if observed) hes):		_					
2.5 cm 5 cm Type: Depth (incl Remarks:	Mucky Peat or Peat ayer: (if observed) hes):		_					
2.5 cm 5 cm Type: Depth (incl Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators:	(S3) (LRR F)	(MLR		of LRR H)	Hydric S	Soil Present? Yes No X
2.5 cm 5 cm Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic	Mucky Peat or Peat .ayer: (if observed) hes): Y Irology Indicators: ators (minimum of o	(S3) (LRR F	d; check all that	(MLR	A 72 & 73	of LRR H)	Hydric S	tors (minimum of two required)
2.5 cm 5 cm Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic Surface	Mucky Peat or Peat .ayer: (if observed) hes): Y trology Indicators: ators (minimum of o	(S3) (LRR F	d; check all that	apply) alt Crust (E	A 72 & 73	of LRR H)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6)
2.5 cm 5 cm Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \	Mucky Peat or Peat .ayer: (if observed) hes): Y Irology Indicators: ators (minimum of o ce Water (A1) Water Table (A2)	(S3) (LRR F	d; check all that	apply) alt Crust (E	A 72 & 73 311) na (B13)	of LRR H)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
2.5 cm 5 cm Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \ Satura	Mucky Peat or Peat Layer: (if observed) hes): Y Irology Indicators: Lators (minimum of occewater (A1) Water Table (A2) Lation (A3)	(S3) (LRR F	d; check all that	apply) alt Crust (Equatic Fau	A 72 & 73 B11) na (B13) ulfide Od	of LRR H) Sor (C1)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6)
2.5 cm 5 cm 5 cm Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \ Satura Water	Mucky Peat or Peat .ayer: (if observed) hes): Y Irology Indicators: ators (minimum of o ce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	(S3) (LRR F	d; check all that	apply) alt Crust (Equatic Fau	311) na (B13) ulfide Od Water Ta	of LRR H) Solve (C1) able (C2)	Hydric S econdary Indica	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
2.5 cm 5 cm 5 cm 7 cm 5 cm 8 cm 1	Mucky Peat or Peat Layer: (if observed) hes): Y Irology Indicators: Lators (minimum of oce Water (A1) Water Table (A2) Lation (A3) r Marks (B1) hent Deposits (B2)	(S3) (LRR F	d; check all that	apply) alt Crust (Equatic Faullydrogen Stry-Season	A 72 & 73 B11) na (B13) ulfide Od Water Ta ospheres o	of LRR H) Sor (C1)	Hydric S econdary Indica	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
2.5 cm 5 cm 5 cm 7 cm 8 cm rictive L Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \ Satura Water Sedim Drift D	Mucky Peat or Peat Layer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3)	(S3) (LRR F	d; check all that S A C C C C	apply) alt Crust (Equatic Faullydrogen Solry-Season widized Rhiz	A 72 & 73 B11) na (B13) ulfide Od Water Ta ospheres of tilled)	of LRR H) Sor (C1) able (C2) on Living Roots (C3)	Hydric S econdary Indica	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
2.5 cm 5 cm 5 cm 7 cm 8 cm rictive L Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \ Satura Water Sedim Drift D Algal	Mucky Peat or Peat .ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)	(S3) (LRR F	d; check all that S A C C C C C C	apply) alt Crust (Equatic Faulydrogen Sury-Season ixidized Rhizwhere not bresence of	A 72 & 73 Barrier Tages of tilled)	of LRR H) Solve (C1) Solve (C2) Solve Living Roots (C3) d Iron (C4)	Hydric S econdary Indica	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
2.5 cm 5 cm 5 cm 7 cm 5 cm 1 cm 2.5 cm 2 cm 5 cm 1 cm 1 cm 1 cm 2 cm 3 cm 2 cm 2 cm 3 cm 4 cm 3 cm 4 cm 4 cm 4 cm 4 cm 5 cm 6 cm 6 cm 6 cm 6 cm 7 cm 7 cm 8 cm 8 cm 8 cm 8 cm 8 cm 9 cm 1	Mucky Peat or Peat Layer: (if observed) Thes): Y Irology Indicators: Lators (minimum of oce Water (A1) Water Table (A2) Lation (A3) The Marks (B1) Lation (B3) Mat or Crust (B4) Deposits (B5)	ne is required	d; check all thatSAFCC	apply) alt Crust (E quatic Fau lydrogen S lry-Season ixidized Rhiz where not resence of hin Muck S	A 72 & 73 B11) na (B13) ulfide Od Water Ta ospheres of tilled) Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric S econdary Indica	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
2.5 cm 5 cm 5 cm 7 cm 5 cm 8 cm 1 cm 1 cm 1 cm 1 cm 2 cm 1 cm 1 cm 2 cm 2 cm 2 cm 2 cm 3 cm 3 cm 4 cm 4 cm 2 cm 3 cm 4 cm 4 cm 4 cm 4 cm 4 cm 5 cm 6	Mucky Peat or Peat Layer: (if observed) Area	ne is required	d; check all thatSAFCC	apply) alt Crust (Equatic Faulydrogen Sury-Season ixidized Rhizwhere not bresence of	A 72 & 73 B11) na (B13) ulfide Od Water Ta ospheres of tilled) Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric S econdary Indica	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm 5 cm 2.5 cm 5 cm 2.5 cm 2	Mucky Peat or Peat Layer: (if observed) Area	ne is required	d; check all thatSAFCC	apply) alt Crust (E quatic Fau lydrogen S lry-Season ixidized Rhiz where not resence of hin Muck S	A 72 & 73 B11) na (B13) ulfide Od Water Ta ospheres of tilled) Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric S econdary Indica	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
2.5 cm 5 cm 5 cm 7 Restrictive L Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic Surface High \ Satura Water Sedim Drift D Algal Iron D Inund Water Field Observ	Mucky Peat or Peat Layer: (if observed) hes): Y Irology Indicators: Lators (minimum of of open water (A1) Water Table (A2) Lation (A3) Ir Marks (B1) Lenent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Leation Visible on Aericy-Stained Leaves (B5) Irology Indicators: Altoriogy Indicators: Altor	ne is required	d; check all thatSC(NPT	apply) alt Crust (Equatic Faulydrogen Solary-Season exidized Rhizelesence of thin Muck Solary (Explain)	A 72 & 73 A 72 & 73 Barrier Strategy of the control of the contr	of LRR H) Solution (C1) Solution (C2) Solution (C4) Solut	Hydric S econdary Indica	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
2.5 cm 5 cm 5 cm 10 Restrictive L Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic Surface High \ Satura Water Sedim Drift D Inund Water Field Observ Surface Water	Mucky Peat or Peat .ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aericy-Stained Leaves (B5) rations: er Present?	ne is required	d; check all thatSAFCC	apply) alt Crust (E quatic Fau lydrogen S lry-Season xidized Rhiz where not resence of hin Muck S bther (Expla	A 72 & 73 Barrier Tage Barri	of LRR H) Solve (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	Hydric S econdary Indica	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
2.5 cm 5 cm 5 cm 2.5 cm 5 cm 2.5 cm 2	Mucky Peat or Peat .ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aericy-Stained Leaves (B5) rations: er Present?	ne is required	d; check all thatSHC((apply) alt Crust (Equatic Faullydrogen Solary-Season wide and Rhizwhere not bresence of hin Muck Solather (Explain No	A 72 & 73 A 72 & 73 Barrier Strategy of the second of th	of LRR H) Solution (C1) Solution (C2) Solution (C4) Solut	Hydric S econdary Indica	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Dete	ermination Data	a Form - Grea	at Plains Regi	on	
Project/Site: I-25/I-80 Interchange	City/Co	ounty: Cheyenne/La	aramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Transpor	tation		State: WY	Sampling Point:	S-43
Investigator(s): R. Newton, D. Soucy			Section,	Township, Range: S2	2 T13N R67W
Landform (hillslope, terrace, etc.): depression	Local	Relief (concave, co	onvex, none):	concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	Lat.	226990.9914	Long:	743767.5194	Datum: WY E
Soil Map Unit Name: Urban land-Evanston comple	x, 0 to 6 percent slopes	;	N	WI Classification:	UPL
Are climatic/hydrologic conditions on the site typical	for this time of year?	Yes X	No (If	no, explain in Remark	(s)
Are Vegetation , Soil , or Hydrology	significantly dis	turbed? Are "Norm	al Circumstances'	present? Yes	X No
Are Vegetation , Soil , or Hydrology				' olain any answers in R	
			,	•	cmarks.)
SUMMARY OF FINDINGS - Attach site map showi		ations, transects,	important leatur	es, etc.	
	No				
Hydric Soil Present? Yes N	√0 X	Is the Sampled Are	ea within a Wetlan	nd? Yes	No X
Wetland Hydrology Present? Yes X	lo				
Remarks: Depressional area with dominant hydrophytic vegeta	tion and wetland hydrol	logy but lacking hyd	Iric soils.		
VEGETATION - Use scientific names of plants.					
Tree Stratum (Plot size: 30x30 ft)		Status Number That Are	nce Test Worksh of Dominant Spe e OBL, FACW, or	cies	1 (A)
2			<i>ng FAC-)</i> : ımber of Dominan	t	
4.			Across All Strata		1 (B)
5. Compliance Complete Sappling/Shrub Stratum (Plot size: 15x15 ft 1.	= Total Cover		of Dominant Spece OBL, FACW, or		100% (A/B)
2		Prevale	nce Index Works	sheet:	
3			Total % Cover	of:	Multiply by:
4		OBL	species	0 x 1	= 0
5		FACW	species	100 x 2	
	= Total Cover	FAC	species	0 x 3	= 0
Herb Stratum (Plot size: 5x5 ft)		FACU	species	0 x 4	
1. Hordeum jubatum 8		FACW UPL	species	0 x 5 =	
2. Distichlis spicata	4 N F	FACW Column	Totals:	(A)) 200 (B)
3				ence Index = B/A =	2.0
4		Hydrop	hytic Vegetation		
5				st for Hydrophytic Veg	etation
6				ce Test is >50%.	
7				ce Index is <3.01	
8 9.			•	gical Adaptations¹ (Pro in Remarks or on a se	•
0.			Problematic	: Hydrophytic Vegetatio	on (Explain)
Woody Vine Stratum (Plot size: 30x30 ft) 1.	00 = Total Cover			ic soil and wetland hydro	ology must be
2	= Total Cover		present, unless dis	turbed or problematic.	
% Bare Ground in Herb Stratum 0	%		Hydrophytic Veget	tation Present?	X YesNo
Remarks:		I			

Depth	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-12	10 YR 3/2	100		-			Clay	
12-14	10 YR 7/3	97	7.5 YR 4/6	3		M	Sandy Clay	
14-18	10 YR 2/1	100	-				Clay	
					·			
¹ Type: C=Co	ncentration, D=Dep	oletion, RM	I=Reduced Matri	x, CS=Cov	ered or Coa	ated Sand Grains.	² Location: PL=P	ore Lining, M=Matrix
Hydric Soil I	ndicators						Indicators	for Problematic Hydric Soils ³ :
Histos	sol (A1)			Sand	dy Gleyed I	Matrix (S4)	1 c	m Muck (A9) (LRR I, J)
Histic	Epipedon (A2)			Sand	dy Redox (S	S5)	Co	ast Prairie Redox (A16) (LRR F, G, H)
Black	Histic (A3)			Strip	ped Matrix	(S6)	Da	rk Surface (S7) (LRR G)
Hydro	gen Sulfide (A4)			Loan	ny Mucky N	Mineral (F1)	Hig	h Plains Depressions (F16)
Stratif	fied Layers (A5) (LF	RF)		Loan	ny Gleyed	Matrix (F2)	(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F,	G , H)		Depl	eted Matrix	(F3)	Re	duced Vertic (F18)
Deple	ted Below Dark Su	face (A11))	Redo	ox Dark Su	rface (F6)	Re	d Parent Material (TF2)
	Dark Surface (A12	,				Surface (F7)	Oti	ner (Explain in Remarks)
	y Mucky Mineral (S	•			x Depress	,		s of hydrophylic vegetation and
	n Mucky Peat or Pe					oressions (F16)		ydrology must be present, unless or problematic.
	Mucky Peat or Pea	t (S3) (LRF	₹F)	(M	LRA 72 & 73	B of LRR H)	distarbed	or problematic.
5 cm	wasky i car or i ca	/ (=						
	.ayer: (if observed)							
			-					
Restrictive L	.ayer: (if observed)						Hydric Soil	Present? Yes No _X
Restrictive L	.ayer: (if observed)						Hydric Soil	Present? Yes No X
Restrictive L Type: Depth (incl	.ayer: (if observed)						Hydric Soil	Present? Yes No_X
Restrictive L Type: Depth (incl	.ayer: (if observed) hes):						Hydric Soil	Present? YesNo_X
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd	ayer: (if observed) hes): Y Irology Indicators:						Hydric Soil	Present? Yes No X
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd	.ayer: (if observed) hes):					S	secondary Indicators	(minimum of two required)
Restrictive L Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indic Surface	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of o			Salt Crust	` '		secondary Indicators	
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \(\)	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2)			Salt Crust	auna (B13)		econdary Indicators	(minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Restrictive L Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \ Satura	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3)			Salt Crust Aquatic Fa Hydrogen	auna (B13) Sulfide Od	lor (C1)	econdary Indicators	(minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive L Type: Depth (incomplete incomplete incomp	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)			Salt Crust Aquatic Fa Hydrogen Dry-Seaso	auna (B13) Sulfide Od on Water T	lor (C1) able (C2)	econdary Indicators	(minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Restrictive L Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High V Satura Watel Sedim	Ayer: (if observed) thes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2)			Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized RI	auna (B13) Sulfide Od on Water T nizospheres	lor (C1)	econdary Indicators	(minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift D	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of observed) Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3)			Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized RI (where no	auna (B13) Sulfide Od on Water T nizospheres of tilled)	lor (C1) able (C2) on Living Roots (C3)	econdary Indicators	(minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \ Satura Water Sedim Drift E Algal	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)			Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized RI (where no	sulfide Od on Water T nizospheres ot tilled) of Reduce	lor (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicators	(minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Restrictive L Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift E Algal Iron D	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	: one is requ	uired; check all th	Salt Crust Aquatic Fa Hydrogen Dry-Seasc Oxidized Ri (where no Presence Thin Muck	auna (B13) Sulfide Od on Water T nizospheres ot tilled) of Reduce	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	secondary Indicators	(minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Restrictive L Type: _ Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \ Satura Water Sedim Drift D Algal Iron D	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aei	: one is requ	uired; check all th	Salt Crust Aquatic Fa Hydrogen Dry-Seasc Oxidized Ri (where no Presence Thin Muck	sulfide Od on Water T nizospheres ot tilled) of Reduce	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicators X X	(minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: _ Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \ Satura Water Sedim Drift E Algal Iron E Inund Water	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of observed) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Ael r-Stained Leaves (E	: one is requ	uired; check all th	Salt Crust Aquatic Fa Hydrogen Dry-Seasc Oxidized Ri (where no Presence Thin Muck	auna (B13) Sulfide Od on Water T nizospheres ot tilled) of Reduce	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicators X X	(minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift E Algal Iron E Inund Water Field Observ	Ayer: (if observed) Ayer: (if observed) Area of the served of the serv	: one is requ	y (B7)	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Ri (where no Presence Thin Muck Other (Ex	auna (B13) Sulfide Od on Water T nizospheres ot tilled) of Reduce c Surface (c) plain in Rei	lor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7) marks)	econdary Indicators X X	(minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift E Algal Iron E Inund Water Field Observ Surface Water	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aei r-Stained Leaves (Exations: er Present?	: one is requ	y (B7)	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized RI (where no Presence Thin Muck Other (Ex	auna (B13) Sulfide Od on Water T nizospheres ot tilled) of Reduce c Surface (i plain in Rei	lor (C1) fable (C2) on Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	econdary Indicators X X	(minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High V Satura Water Sedim Drift E Algal Iron E Inund Water Field Observ Surface Water Water Table	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aei r-Stained Leaves (Exations: er Present?	cial Imager	y (B7)	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized RI (where no Presence Thin Muck Other (Ex	auna (B13) Sulfide Od on Water T nizospheres ot tilled) of Reduce c Surface (c) plain in Rei	lor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7) marks)	econdary Indicators X X	(minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Determination	n Data Form	- Great Plains Regi	on	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Transportation	, , <u></u>	State: WY	Sampling Point:	S-44
Investigator(s): R. Newton, D. Soucy		Section,	Township, Range: S1	T13N R67W
Landform (hillslope, terrace, etc.): minor depression	Local Relief (co	ncave, convex, none):	concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	Lat. 2268	18.526 Long:	744082.0723	Datum: WY E
Soil Map Unit Name: <u>Urban land-Evanston complex, 0 to 6 perce</u>	ent slopes	NV	VI Classification:	UPL
Are climatic/hydrologic conditions on the site typical for this time o	f year? Yes	X No (If	no, explain in Remarks	s)
Are Vegetation, Soil, or Hydrologysignif	icantly disturbed? A	e "Normal Circumstances"	present? Yes	X No
Are Vegetation , Soil , or Hydrology natura	ally problematic?	(If needed, exp	olain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, tra	ansects, important feature	es, etc.	
Hydrophytic Vegetation Present? Yes X No				
Hydric Soil Present? Yes No X	Is the Sar	npled Area within a Wetlan	d? Yes	No X
Wetland Hydrology Present? Yes X No			_	
Remarks:				
Depressional area with dominant hydrophytic vegetation and wetla	and hydrology but lag	cking hydric soils		
, , , , ,	and riyurology but lac	Sking flydric solis.		
VEGETATION - Use scientific names of plants.		Dominance Test Worksh	oot:	
Absolute Domit Tree Stratum (Plot size: 30x30 ft) % Cover Speci		Number of Dominant Spec		
1.		That Are OBL, FACW, or I	FAC:	2 (A)
2.		(excluding FAC-):		
3.		Total Number of Dominant	t	
4.		Species Across All Strata:		2 (B)
5				
	Cover	Percent of Dominant Spec That Are OBL, FACW, or I		100% (A/B)
2.		Prevalence Index Works	heet:	
3.		Total % Cover o	of:	Multiply by:
4		OBL species	70 x 1 =	70
5		FACW species	25 x 2 =	
0 = Total (FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)		FACU species	0 x 4 =	
1. Alopecurus pratensis 20 Y		UPL species	$0 \times 5 =$	
2. Eleocharis palustris 70 Y 3. Hordeum jubatum 5 N		Column Totals:	95 (A) ence Index = B/A =	120 (B)
3. Hordeum jubatum 5		Hydrophytic Vegetation		1.3
5.			st for Hydrophytic Vege	etation
6.			ce Test is >50%.	attori
7.		X 3. Prevalence		
8. 9.		4. Morpholo	gical Adaptations¹ (Pro in Remarks or on a se	•
1 ⁰		Problematic	Hydrophytic Vegetation	n (Explain)
95 = Total (Cover		Trydrophlytto Vogotatio	ii (Explaiii)
Woody Vine Stratum (Plot size: 30x30 ft)		1		
		•	c soil and wetland hydrol curbed or problematic.	ogy must be
0 = Tot	al Cover	present, uniess dist	arbed or problematic.	
% Bare Ground in Herb Stratum 5 %	50101	Hydrophytic Veget	ation Present?	X Yes No
Remarks:		<u> </u>		

Depth	Matrix			Redox Fe	atures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10 YR 3/2	100					Loam		
4-18	10 YR 2/1	100					Clay		
			_						
			-					_	
¹ Type: C=Cc	oncentration, D=Dep	oletion RM=I	Reduced Matrix	CS=Cover	ed or Coa	ated Sand Grains	² l ocation: PI =	Pore Lining, M=Matrix	
Hydric Soil I	•	, , , , , , , , , , , , , , , , , , , ,	Todaood Matix,			nou ouriu orumo.		ors for Problematic Hydric	Soils ³ ·
•	sol (A1)			Sandy	Gleved M	latrix (S4)		cm Muck (A9) (LRR I, J)	30113 .
	Epipedon (A2)		_	_	Redox (S			Coast Prairie Redox (A16) (L	DD E G U/
	Histic (A3)		_		ed Matrix	,			.KK F, G, FI)
	` '		_			` '		Dark Surface (S7) (LRR G) High Plains Depressions (F1	C)
	ogen Sulfide (A4)	DD E\	_		-	lineral (F1)	<u> </u>		•
	fied Layers (A5) (LF	•	_		-	Matrix (F2)	-	(LRR H outside of MLRA	/2 & /3)
	Muck (A9) (LRR F,		_		ed Matrix	` '		Reduced Vertic (F18)	
	eted Below Dark Sur		_		Dark Sur	, ,		Red Parent Material (TF2)	
	Dark Surface (A12)	,	_			Surface (F7)		Other (Explain in Remarks)	
	y Mucky Mineral (S ^r	1)	_		Depressi			ors of hydrophylic vegetati	
	Marrian Dantan Da	-+ (OO) /I DE			'lains Den	ressions (F16)	wetland	I hydrology must be presen	it, unless
2.5 cr	m Mucky Peat or Pe		_	_			disturbe		
2.5 cr	m Mucky Peat or Pea Mucky Peat or Pea		_	_	RA 72 & 73		disturbe	ed or problematic.	
2.5 cm	-		_	_			disturbe		
2.5 cm	Mucky Peat or Pea		_	_			disturbe		
2.5 cm 5 cm	Mucky Peat or Peat _ayer: (if observed)		_	_					No_X
2.5 cm 5 cm Restrictive L	Mucky Peat or Peat _ayer: (if observed)		_	_				ed or problematic.	NoX
2.5 cm 5 cm Restrictive L Type: Depth (inc.)	Mucky Peat or Peat _ayer: (if observed)		_	_				ed or problematic.	No_X
2.5 cm 5 cm Restrictive L Type: Depth (inc.	Mucky Peat or Peat _ayer: (if observed) _hes):		_	_				ed or problematic.	NoX
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks:	Mucky Peat or Peat _ayer: (if observed) _hes):	t (S3) (LRR I	_	_				ed or problematic.	NoX
2.5 cm 5 cm Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat _ayer: (if observed) _hes): Y drology Indicators:	t (S3) (LRR I	=)	(MLR		of LRR H)	Hydric So	il Present? Yes	
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc	Mucky Peat or Peat _ayer: (if observed) _thes): Y drology Indicators: eators (minimum of contents)	t (S3) (LRR I	ed; check all that	(MLR	RA 72 & 73	of LRR H)	Hydric So	il Present? Yes	ired)
2.5 cm 5 cm Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic	Mucky Peat or Peat Layer: (if observed) Thes): Y drology Indicators: cators (minimum of oce Water (A1)	t (S3) (LRR I	ed; check all that	(MLR apply) Salt Crust (E	B11)	of LRR H)	Hydric So	il Present? Yes rs (minimum of two requi	ired)
2.5 cm 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High	Mucky Peat or Peat Layer: (if observed) Thes): Ty Chrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2)	t (S3) (LRR I	ed; check all that	apply) Salt Crust (E	B11) ina (B13)	of LRR H)	Hydric So	rs (minimum of two requestions Sparsley Vegetated Concav	<i>ired)</i> (6) e Surf. (B8)
2.5 cm 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High \(\) Satura	Mucky Peat or Peat Layer: (if observed) Thes): Archael Street	t (S3) (LRR I	ed; check all that	apply) Salt Crust (E	B11) una (B13)	of LRR H) S or (C1)	Hydric So	rs (minimum of two requiports Surface Soil Cracks (B. Sparsley Vegetated Concaver) Drainage Patterns (B1	<i>ired)</i> :6) e Surf. (B8)
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water	Mucky Peat or Peat Layer: (if observed) Phes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ration (A3) r Marks (B1)	t (S3) (LRR I	ed; check all that	apply) Salt Crust (Exquatic Fau	B11) una (B13) ulfide Odo	of LRR H) S or (C1) able (C2)	Hydric So	rs (minimum of two requestions Sparsley Vegetated Concav	ired) (6) e Surf. (B8) (0) s on Living
2.5 cm 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Watel Sedin	Amucky Peat or Peat Layer: (if observed) Amucky Peat or Peat Layer: (if observed) Amucky Peat or Peat Amucky	t (S3) (LRR I	ed; check all that	apply) Salt Crust (Exquatic Faulydrogen Soly-Season	B11) una (B13) ulfide Odo Water Ta	of LRR H) S or (C1)	Hydric So	rs (minimum of two requires Surface Soil Cracks (Begansley Vegetated Concave Drainage Patterns (B1 Oxidized Rhizospheres Roots (C3) (where tilling	ired) (6) e Surf. (B8) (0) s on Living
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Watel Sedin Drift D	Mucky Peat or Peat Layer: (if observed) Thes): Y drology Indicators: cators (minimum of occert (A1) Water Table (A2) cation (A3) or Marks (B1) ment Deposits (B2) Deposits (B3)	t (S3) (LRR I	ed; check all that	apply) Salt Crust (Exquatic Fau Hydrogen S Ory-Season Oxidized Rhiz	B11) Ina (B13) Sulfide Odd Water Ta	of LRR H) S or (C1) able (C2) on Living Roots (C3)	Hydric So	rs (minimum of two requires Surface Soil Cracks (Begin Sparsley Vegetated Concave Drainage Patterns (B1 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8)	ired) 66) e Surf. (B8) 0) s on Living ed)
2.5 cm 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift I	Mucky Peat or Peat Layer: (if observed) Thes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	t (S3) (LRR I	ed; check all that	apply) Salt Crust (Exquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not	B11) una (B13) ulfide Odo Water Ta cospheres o tilled) f Reduced	of LRR H) S or (C1) able (C2) on Living Roots (C3)	Hydric So	rs (minimum of two requivable) Surface Soil Cracks (Begin Sparsley Vegetated Concaver Drainage Patterns (B1 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8) Saturation Visible on Aeria	ired) 16) e Surf. (B8) 0) s on Living ed)
2.5 cm 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift [Algal Iron D	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of of ce Water (A1) Water Table (A2) Eation (A3) In Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	t (S3) (LRR I	ed; check all that	apply) Salt Crust (Exquatic Fau Hydrogen S Ory-Season Oxidized Rhiz Where not Presence of	B11) Ina (B13) Iulfide Odo I Water Ta cospheres o tilled) f Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric So secondary Indicato	rs (minimum of two required Surface Soil Cracks (B. Sparsley Vegetated Concave Drainage Patterns (B1 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8) Saturation Visible on Aeria Geomorphic Position (ired) 66) e Surf. (B8) 0) s on Living ed) al Imagery (C9
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Watel Sedin Drift D Algal Iron D	Mucky Peat or Peat Layer: (if observed) Y drology Indicators: cators (minimum of occert (A1) Water Table (A2) cation (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Idation Visible on Aer	one is require	ed; check all that	apply) Salt Crust (Exquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not	B11) Ina (B13) Iulfide Odo I Water Ta cospheres o tilled) f Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric So secondary Indicato	rs (minimum of two requires (minimum of two requires Soil Cracks (Begin Sparsley Vegetated Concave Drainage Patterns (B1 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8) Saturation Visible on Aeria Geomorphic Position (FAC-Neutral Test (D5)	ired) 66) e Surf. (B8) 0) s on Living ed) al Imagery (C9
2.5 cm 5 cm Festrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Watel Sedin Drift D Algal Iron D	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of of ce Water (A1) Water Table (A2) Eation (A3) In Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	one is require	ed; check all that	apply) Salt Crust (Exquatic Fau Hydrogen S Ory-Season Oxidized Rhiz Where not Presence of	B11) Ina (B13) Iulfide Odo I Water Ta cospheres o tilled) f Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric So secondary Indicato	rs (minimum of two required Surface Soil Cracks (B. Sparsley Vegetated Concave Drainage Patterns (B1 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8) Saturation Visible on Aeria Geomorphic Position (ired) 66) e Surf. (B8) 0) s on Living ed) al Imagery (C9
2.5 cm 5 cm Festrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift D Algal Iron D Inund Water Field Observ	Mucky Peat or Peat Layer: (if observed) Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) cation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) clation Visible on Aer r-Stained Leaves (E	one is require	ed; check all that	apply) Salt Crust (Explain the content of the conte	B11) una (B13) ulfide Odo Water Ta cospheres o tilled) f Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric So secondary Indicato	rs (minimum of two requires (minimum of two requires Soil Cracks (Begin Sparsley Vegetated Concave Drainage Patterns (B1 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8) Saturation Visible on Aeria Geomorphic Position (FAC-Neutral Test (D5)	ired) 66) e Surf. (B8) 0) s on Living ed) al Imagery (C9
2.5 cm 5 cm Festrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Water Sedin Drift D Algal Iron D Inund Water	Mucky Peat or Peat Layer: (if observed) Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) cation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) clation Visible on Aer r-Stained Leaves (E	one is require	ed; check all that	apply) Salt Crust (Explain the content of the conte	B11) una (B13) ulfide Odo Water Ta cospheres o tilled) f Reduced Surface (C	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric So secondary Indicato	rs (minimum of two requinations of two requirements of two require	ired) 66) e Surf. (B8) 0) s on Living ed) al Imagery (C9 D2) D7) (LRR F)
2.5 cm 5 cm Festrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfac High V Satur: Water Sedin Drift E Algal Iron E Inund Water Field Observ Surface Water Water Table	Mucky Peat or Peat Layer: (if observed) Thes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer r-Stained Leaves (Evations: er Present?	t (S3) (LRR I	ed; check all that H G (F T T Yes Yes Yes	apply) Salt Crust (Exquatic Fau Hydrogen S Ory-Season Oxidized Rhiz Where not Presence of Thin Muck S Other (Expla	B11) una (B13) ulfide Odo Water Ta cospheres o tilled) f Reduced Surface (Cain in Ren	of LRR H) Sor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) narks)	Hydric So secondary Indicato	rs (minimum of two requinations of two requinations) Surface Soil Cracks (Best Sparsley Vegetated Concaver Drainage Patterns (B1 Oxidized Rhizospheres Roots (C3) (where tilled Crayfish Burrows (C8) Saturation Visible on Aeria Geomorphic Position (FAC-Neutral Test (D5) Frost-Heave Hummocks (C1)	ired) 66) e Surf. (B8) 0) s on Living ed) al Imagery (C9 D2) D7) (LRR F)

Wetland D	etermination	n Data Forn	n - Great Pla	ains Region		
Project/Site: I-25/I-80 Interchange		City/County: Ch	eyenne/Laramie	e :	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Tran	sportation			State: WY	Sampling Point:	S-45
Investigator(s): R. Newton, D. Soucy				Section, Town	ship, Range: S1	T13N R67W
Landform (hillslope, terrace, etc.): depression	on	Local Relief (c	oncave, convex,	none): conca	ave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	<u> </u>	Lat. 2266	674.3428	Long: 74	4223.2503	Datum: WY E
Soil Map Unit Name: Urban land-Evanston co	mplex, 0 to 6 percer	nt slopes		NWI Cla	assification:	UPL
Are climatic/hydrologic conditions on the site typ	oical for this time of	year? Ye	s X N	lo (If no, ex	xplain in Remarks	s)
Are Vegetation , Soil , or Hydro	oloav sianific	antly disturbed?	Are "Normal Circ	umstances" prese	•	X No
Are Vegetation , Soil , or Hydro		ly problematic?		needed, explain a		
 '						illaiks.)
SUMMARY OF FINDINGS - Attach site map si		boint locations, i	ransects, impo	rtant leatures, et	<u>. </u>	
Hydrophytic Vegetation Present? Yes X					.,	
Hydric Soil Present? Yes X	No	Is the Sa	ampled Area with	nin a Wetland?	Yes_	X No
Wetland Hydrology Present? Yes X	No					
Remarks:						
Depressional palustrine emergent wetland PEM						
VEGETATION - Use scientific names of plant			Dominanas T	est Worksheet:		
<u>Tree Stratum</u> (Plot size: 30x30 ft)	Absolute Domina % Cover Specie		Number of Do	minant Species , FACW, or FAC:		1 (A)
2.			(excluding FA			(A)
3			Total Number			
4			Species Acros	ss All Strata:		1 (B)
5 <u> </u>						
Sapling/Shrub Stratum (Plot size: 15x15	0 = Total C	over		minant Species , FACW, or FAC:		100% (A/B)
2.			Prevalence In	ndex Worksheet:		
3.			Tota	l % Cover of:	1	Multiply by:
4.			OBL speci	es	89 x 1 =	89
5.			FACW speci	es	6 x 2 =	12
	0 = Total C	over	FAC speci	es	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)			FACU speci	es	0 x 4 =	0
Carex utriculata	89 Y	OBL	UPL speci	es	0 x 5 =	0
2. Juncus balticus	6 N	FACW	Column Totals	s:	95 (A)	101 (B)
3.				Prevalence I	ndex = B/A =	1.1
4.			Hydrophytic \	Vegetation Indica	itors:	
5.			X	1. Rapid Test for I	-lydrophytic Vege	tation
6.			X	2. Dominance Tes	st is >50%.	
7.			X	3. Prevalence Ind	ex is <u><</u> 3.0¹	
8. <u> </u>				 Morphological A porting data in Re 		
0.				Problematic Hydro	ophytic Vegetation	n (Explain)
	95 = Total C	over				
Woody Vine Stratum (Plot size: 30x30 ft	_)					
1			¹ Indic	ators of hydric soil a	and wetland hydrol	ogy must be
2			prese	nt, unless disturbed	or problematic.	
% Bare Ground in Herb Stratum 5	0 = Tota %	Cover	Hydro	ophytic Vegetation	Present? _	X YesNo
Pomorko:						
Remarks:						

	Matrix			Redox F	eatures			
(inches)	Color (moist)	% C	color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-16	10 YR 2/1	97	7.5 YR 5/8	3	С	M	Clay	
					-			
			-		-			
1			- december 1 Marketin 1	20.0			21 11	Donal Indian M. Matrix
	oncentration, D=Deple	uon, Rivi=Re	educed Matrix, C	JS=Cove	ered or Co	bated Sand Grains.		Pore Lining, M=Matrix
Hydric Soil I								ors for Problematic Hydric Soils ³ :
	sol (A1)				-	Matrix (S4)		I cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		y Redox (Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		_		oed Matrix	` ,	!	Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)		_		-	Mineral (F1)	!	High Plains Depressions (F16)
	fied Layers (A5) (LRR	•	_		-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F, G,	H)	_	Deple	eted Matri	x (F3)	'	Reduced Vertic (F18)
Deple	eted Below Dark Surface	ce (A11)		X Redo	x Dark Su	urface (F6)	'	Red Parent Material (TF2)
Thick	Dark Surface (A12)		_	Deple	eted Dark	Surface (F7)		Other (Explain in Remarks)
Sand	y Mucky Mineral (S1)		_	Redo	x Depress	sions (F8)	³ Indicat	ors of hydrophylic vegetation and
2.5 cr	m Mucky Peat or Peat	(S2) (LRR (G, H)	High	Plains De	pressions (F16)		d hydrology must be present, unless
							disturb	ed or problematic.
5 cm	Mucky Peat or Peat (S	63) (LRR F)		(ML	.RA /2 & /	3 of LRR H)	4.544.5	
	Mucky Peat or Peat (S 	63) (LRR F)		(ML	.KA /2 & /	3 of LRK H)	1	
Restrictive L		S3) (LRR F)		(ML	.RA /2 & /	3 Of LRK H)		
Restrictive L	_ayer: (if observed)	63) (LRR F)		(ML	.RA /2 & /	3 Of LRR H)		
Restrictive L Type: Depth (inc	_ayer: (if observed)	63) (LRR F)		(ML	.RA /2 & /	3 of LRR H)		il Present? Yes X No
Restrictive L	_ayer: (if observed)	S3) (LRR F)		(ML	.KA /2 & /	3 of LRR H)		
Restrictive L Type: Depth (inc	_ayer: (if observed)	63) (LRR F)		(ML	.RA /2 & /	3 of LRR H)		
Restrictive L Type: Depth (inc Remarks:	_ayer: (if observed) hes):	63) (LRR F)		(ML	.RA /2 & /	3 of LRR H)		
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd	hes): Y drology Indicators:				.RA /2 & /		Hydric So	il Present? Yes X No
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd	_ayer: (if observed) hes):				.RA /2 & /		Hydric So	
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	hes): Y drology Indicators:		; check all that				Hydric So	il Present? Yes X No
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	Arology Indicators:		l; check all that a	apply)		S	Hydric So	il Present? Yes X No
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	Ayer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of one) Coe Water (A1)		l; check all that a	apply) alt Crust quatic Fa	(B11)	s	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Ayer: (if observed) thes): Y drology Indicators: cators (minimum of one) ce Water (A1) Water Table (A2)		l; check all that a	apply) alt Crust quatic Fa ydrogen	(B11) auna (B13 Sulfide Od	s	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Ayer: (if observed) hes): Y drology Indicators: cators (minimum of one) ce Water (A1) Water Table (A2) ation (A3)		l; check all that a	<i>apply)</i> alt Crust quatic Fa ydrogen ry-Seaso	(B11) auna (B13 Sulfide Oo on Water T	s) dor (C1)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin	Ayer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of one) Coe Water (A1) Water Table (A2) ation (A3) r Marks (B1)		l; check all that (<i>apply)</i> alt Crust quatic Fa ydrogen ry-Seaso	(B11) auna (B13 Sulfide Oo on Water 1 aizospheres	S) dor (C1) Table (C2)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyo Primary Indic Surfa High Satur Wate Sedin Drift I	Y drology Indicators: eators (minimum of one ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2)		l; check all that a	apply) alt Crust quatic Fa ydrogen ry-Seaso xidized Rh	(B11) auna (B13 Sulfide Oo on Water T aizospheres	S) dor (C1) Table (C2)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I X Algal	Ayer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of one) Coe Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3)		l; check all that aSa	apply) alt Crust quatic Fa ydrogen ry-Seaso xidized Rh where no	(B11) auna (B13 Sulfide Oo on Water T aizospheres	S) dor (C1) Table (C2) s on Living Roots (C3) ed Iron (C4)	econdary Indicate	res (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I X Algal Iron I	Ayer: (if observed) Thes): Y drology Indicators: cators (minimum of one) ce Water (A1) Water Table (A2) cation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)	e is requirea	/; check all that aSi	apply) alt Crust quatic Fa ydrogen ry-Seaso xidized Rh where no resence o	(B11) auna (B13 Sulfide Oo in Water T izospheres it tilled) of Reduce	S dor (C1) Table (C2) s on Living Roots (C3) ed Iron (C4) (C7)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [X Algal Iron [Inund	Y drology Indicators: eators (minimum of one ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	e is required	/; check all that aSi	apply) alt Crust quatic Fa ydrogen ry-Seaso xidized Rh where no resence o	(B11) auna (B13 Sulfide Od on Water T aizospheres of tilled) of Reduce Surface (S dor (C1) Table (C2) s on Living Roots (C3) ed Iron (C4) (C7)	econdary Indicato	il Present? Yes X No ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I X Algal Iron I Inund Wate	Ayer: (if observed) Thes): Trology Indicators: Eators (minimum of one) Ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Idation Visible on Aerial r-Stained Leaves (B9)	e is required	/; check all that aSiSi	apply) alt Crust quatic Fa ydrogen ry-Seaso xidized Rh where no resence o	(B11) auna (B13 Sulfide Od on Water T aizospheres of tilled) of Reduce Surface (S dor (C1) Table (C2) s on Living Roots (C3) ed Iron (C4) (C7)	econdary Indicato	ril Present? Yes X No Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I X Algal Iron I Inund Wate Field Observ	Ayer: (if observed) Thes): Y Arology Indicators: Eators (minimum of one) Ce Water (A1) Water Table (A2) Eation (A3) In Marks (B1) Enent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aerial In-Stained Leaves (B9) Vations:	e is required	; check all that a	apply) alt Crust quatic Fa ydrogen ry-Seaso xidized Rh where no resence on nin Muck ther (Exp	(B11) auna (B13 Sulfide Oc on Water T izospheres of tilled) of Reduce Surface (olain in Re	Solution (C1) Fable (C2) Son Living Roots (C3) and Iron (C4) (C7) Cemarks)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [X Algal Iron [Inund Wate Field Observ Surface Wate	Ayer: (if observed) Thes): Y Arology Indicators: Eators (minimum of one) Ce Water (A1) Water Table (A2) Eation (A3) In Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aerial In-Stained Leaves (B9) Vations: Ear Present?	e is required	/; check all that (apply) alt Crust quatic Fa ydrogen ry-Seaso xidized Rh where no resence on in Muck ther (Exp	(B11) auna (B13 Sulfide Od on Water T aizospheres of tilled) of Reduce Surface (olain in Re	S Sidor (C1) Table (C2) Son Living Roots (C3) and Iron (C4) (C7) amarks) Depth (inches)	econdary Indicato	ril Present? Yes X No Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I X Algal Iron I Inund Wate Field Observ Surface Wate Water Table	Ayer: (if observed) Thes): Y Arology Indicators: Eators (minimum of one) Ce Water (A1) Water Table (A2) Eation (A3) In Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aerial In-Stained Leaves (B9) Vations: Ear Present?	e is required	; check all that a	apply) alt Crust quatic Fa ydrogen ry-Seaso xidized Rh where no resence on Muck ther (Exp	(B11) auna (B13 Sulfide Oc on Water T izospheres of tilled) of Reduce Surface (olain in Re	Solution (C1) Fable (C2) Son Living Roots (C3) and Iron (C4) (C7) Cemarks)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determination	on Data	Form - Grea	at Plains Reg	ion	
Project/Site: I-25/I-80 Interchange		City/Cou	nty: Cheyenne/L a	aramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of To	ansportation			State: WY	Sampling Point:	S-46
Investigator(s): R. Newton, D. Soucy					n, Township, Range: <u>S1</u>	T13N R67W
Landform (hillslope, terrace, etc.): roads	оре	Local R	Relief (concave, co	onvex, none):	none	Slope (%): 0-1
Subregion (LRR): G - Western Great Pla		Lat.	226680.7916	Long:	744230.7508	Datum: WY E
Soil Map Unit Name: <u>Urban land-Evanston</u>	complex, 0 to 6 per	cent slopes			IWI Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for this time	of year?	Yes X	No(If no, explain in Remarks	s)
Are Vegetation, Soil, or H	ydrologysign	ificantly distu	irbed? Are "Norm	al Circumstances	s" present? Yes	X No
Are Vegetation , Soil , or H	ydrology natu	urally problem	natic?	(If needed, e)	oplain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map	showing samplin	g point loca	tions, transects,	important featu	res, etc.	
Hydrophytic Vegetation Present? Yes	No X					
Hydric Soil Present? Yes	No X	ls	s the Sampled Are	ea within a Wetla	nd? Yes	No X
Wetland Hydrology Present? Yes	No X		•		_	
Remarks:	<u> </u>					
Paired upland point for PEM-14.						
VEGETATION - Use scientific names of pla	ants.					
Tree Stratum (Plot size: 30x30 ft)			.outo.	nce Test Works of Dominant Spo		
Tree Stratum (Plot size: 30x30 ft)	% Cover Spe	ecies? St		OBL, FACW, or		0 (A)
2				ng FAC-):		0 (A)
3.			[
4.				ımber of Domina Across All Strata		2 (B)
5.			— Species	ACIOSS All Otlate	<u> </u>	(Б)
J	0 = Total	l Cover				
 Sapling/Shrub Stratum (Plot size: 15x	15 ft)	OOVCI		of Dominant Spe OBL, FACW, or		0% (A/B)
1	1311)		matAit	OBE, I AOW, O		(A/B)
2			Prevale	nce Index Work	sheet:	
3.			<u> </u>	Total % Cover		Multiply by:
4			OBL	species	0 x 1 =	
5.			FACW	species	5 x 2 =	
··	0 = Total	l Cover	FAC	species	0 x 3 =	
Herb Stratum (Plot size: 5x5 ft)			FACU	species	30 x 4 =	
1. Alopecurus pratensis	5	N FA	ACW UPL	species	65 x 5 =	
2. Agropyron cristatum	65	Υ	NI Column	Totals:	100 (A)	455 (B)
3. Poa pratensis	30		ACU		lence Index = B/A =	4.6
4.				hytic Vegetation	Indicators:	
5.			' '		est for Hydrophytic Vege	etation
6.				2. Domina	nce Test is >50%.	
7.				3. Prevalei	nce Index is <3.01	
8.				4. Morphol	ogical Adaptations¹ (Pro	vide sup-
9.				porting dat	a in Remarks or on a se	parate sheet)
0.				Problemati	c Hydrophytic Vegetatio	n (Explain)
	100 = Total	l Cover				
Woody Vine Stratum (Plot size: 30x30	ft)					
1.				¹ Indicators of hyd	ric soil and wetland hydrol	logy must be
2.					sturbed or problematic.	=-
	0 = To	otal Cover				
% Bare Ground in Herb Stratum	0 %			Hydrophytic Vego	etation Present?	Yes X No
Remarks:						
Species with no indicator (NI) are treated as	UPL for this analysis	S.				

Profile Desc	cription: (Describe to	o the depth ne	eded to docume	nt the indica	tor or o	confirm the absent	ce of indicators.)	
Depth	Matrix		F	Redox Featu	res			
(inches)	Color (moist)	% C	Color (moist)	% T	ype ¹	Loc ²	Texture	Remarks
0-10	10 YR 2/2	100					Sandy Clay Loam	
10								shovel refusal - road fill
¹ Type: C=Ce	oncentration, D=Dep	letion, RM=R	educed Matrix, C	S=Covered	or Coa	ited Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil	Indicators						Indicat	ors for Problematic Hydric Soils ³ :
_	sol (A1)			Sandy Gle	eved M	latrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)			— Sandy Re	-			Coast Prairie Redox (A16) (LRR F, G, H)
	(Histic (A3)			Stripped N	`	,		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)			_		lineral (F1)		High Plains Depressions (F16)
	ified Layers (A5) (LR	RF)		_	-	лаtrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	:		Depleted	-			Reduced Vertic (F18)
	eted Below Dark Sur			Redox Da				Red Parent Material (TF2)
	Dark Surface (A12)	` ,				Surface (F7)		Other (Explain in Remarks)
	ly Mucky Mineral (S1			Redox De				
	m Mucky Peat or Pe	,	G. H)	_	•	ressions (F16)		tors of hydrophylic vegetation and dhydrology must be present, unless
	Mucky Peat or Peat			_		of LRR H)		ed or problematic.
	-					•		
Restrictive I	Layer: (if observed)							
Type:								
Depth (inc	ches):						Hydric Sc	oil Present? Yes No X
Remarks:								
HYDDOLOG								
HYDROLOG								
_	drology Indicators:	no io roquiros	t about all that a	nn/u)		9	oondon, Indicate	ore (minimum of two required)
-	cators (minimum of o	rie is required				30	econdary indicate	ors (minimum of two required)
	ace Water (A1)			It Crust (B11	•			Surface Soil Cracks (B6)
	Water Table (A2)			uatic Fauna		(04)		Sparsley Vegetated Concave Surf. (B8)
	ration (A3)			drogen Sulfi				Drainage Patterns (B10) Oxidized Rhizospheres on Living
	er Marks (B1)			/-Season Wa		,		Roots (C3) (where tilled)
	ment Deposits (B2)					on Living Roots (C3)		Crayfish Burrows (C8)
	Deposits (B3)		•	here not till	•	Ll. (04)		_ ` ` ` '
— ·	Mat or Crust (B4)			esence of Re		,		Saturation Visible on Aerial Imagery (C9)
	Deposits (B5)	(5		in Muck Surf	•	,		Geomorphic Position (D2)
	dation Visible on Aeri	0 , (/)Oti	ner (Explain	ın Ken	narks)		FAC-Neutral Test (D5)
Wate	er-Stained Leaves (B	9)						Frost-Heave Hummocks (D7) (LRR F)
Field Obser	vations:							
Surface Wat	er Present?		Yes	No 2	<u>х</u> [Depth (inches)		Wetland Hydrology
Water Table	Present?		Yes	No_2	<u> </u>	Depth (inches)		Present?
Saturation P	resent? (includes ca	oillary fringe)	Yes	No 2	<u> </u>	Depth (inches)		Yes <u>X</u> No
Remarks:								
I								

Wetland	Determinati	on Data F	orm - Gre	at Plains Regi	on	
Project/Site: I-25/I-80 Interchange		City/County	/: Cheyenne/L	aramie	Sampling Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Tra	ansportation	_		State: WY	Sampling Point:	S-47A
Investigator(s): R. Newton, D. Soucy				Section,	Township, Range: S'	1 T13N R67W
Landform (hillslope, terrace, etc.): depres	sion	Local Rel	ief (concave, c	onvex, none):	concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Pla	ins	Lat.	226479.6867	Long:	744503.7225	Datum: WY E
Soil Map Unit Name: Urban land-Evanston o	complex, 0 to 6 per	cent slopes		N\	VI Classification:	UPL
Are climatic/hydrologic conditions on the site t	ypical for this time	of year?	Yes X	No (If	no, explain in Remark	ks)
Are Vegetation , Soil , or Hy	drology sigr	ificantly disturb	ed? Are "Norm	al Circumstances"	present? Yes	X No
Are Vegetation , Soil , or Hy		urally problema			' olain any answers in R	
SUMMARY OF FINDINGS - Attach site map		• •				iomarko.)
-		g point locatio	nis, transects,	important leatur	es, etc.	
Hydrophytic Vegetation Present? Yes						
Hydric Soil Present? Yes		Is t	he Sampled Ar	ea within a Wetlan	d? Yes	X No
Wetland Hydrology Present? Yes	X No					
Remarks:						
Depressional palustrine emergent wetland PE	M-15A in on/off-rar	mps connected	via culverts.			
VEGETATION - Use scientific names of pla	nts.					
Troc Stratum (Diet size: 20v20 ft)		ninant Indica		nce Test Worksh		
Tree Stratum (Plot size: 30x30 ft)	% Cover Spe	ecies? Stat		of Dominant Spece OBL, FACW, or		2 (4)
1				ing FAC-):		(A)
2			<u> </u>	,		
3				umber of Dominan Across All Strata:		2 (B)
5.			— Species	ACIOSS All Stiata.	·	(B)
o	0 = Tota	I Cover				
Sanling/Shrub Stratum (Dlot size: 15v1		i Covei		of Dominant Spec		100% (A/D)
Sapling/Shrub Stratum (Plot size: 15x1	15 ft)		That Air	e OBL, FACW, or		100% (A/B)
2			Provale	nce Index Works	hoot:	
3.			— Frevale	Total % Cover of		Multiply by:
4			OBL	species	10 x 1	
5.			— FACW	species	36 x 2	
J	0 = Tota	l Cover	FAC	species	$\frac{30}{0}$ \times 3	
Herb Stratum (Plot size: 5x5 ft)		1 00001	FACU	species	$\frac{0}{0}$ \times 4	
1. Hordeum jubatum	25	Y FAC		species	$\frac{0}{0}$ \times 5	
Alopecurus pratensis		N FAC		•	46 (A	
3. Puccinellia nuttalliana	10	Y OB			ence Index = B/A =	1.8
4. Phalaris arundinacea		N FAC		hytic Vegetation		1.0
5.	_ _	TAC		•	st for Hydrophytic Veg	etation
6.					ce Test is >50%.	ctation
7.					ce Index is <3.01	
8.					gical Adaptations¹ (Pro	ovide sup-
9.					in Remarks or on a s	•
0.				Problematic	Hydrophytic Vegetation	on (Explain)
	46 = Tota	l Cover			ingaropinguo vogotati	on (Explain)
Woody Vine Stratum (Plot size: 30x30		. 50.01				
1	<u></u>)			1		
2					ic soil and wetland hydro turbed or problematic.	ology must be
	0 = To	otal Cover	— 	present, unless dist	turbed of problematic.	
% Bare Ground in Herb Stratum 54		olai OUVEI		Hydrophytic Veget	ation Present?	X Yes No
Remarks:			ı			
Bare ground is algal mat.						

D (1 NA -4).				ce of indicators.)	
Depth Matrix	R	edox Features			
(inches) Color (moist) % Color	or (moist)	% Type	Loc ²	Texture	Remarks
0-1 10 YR 2/1 100				muck	
1-5 10 YR 3/2 100			_	Sand	
5					restricted layer - asphalt?
¹ Type: C=Concentration, D=Depletion, RM=Redu	uced Matrix, CS	=Covered or C	Coated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Indicators				Indicate	ors for Problematic Hydric Soils ³ :
Histosol (A1)		Sandy Gleyed	d Matrix (S4)		cm Muck (A9) (LRR I, J)
Histic Epipedon (A2)		Sandy Redox			Coast Prairie Redox (A16) (LRR F, G, H)
Black Histic (A3)		Stripped Matr	rix (S6)	 -	Dark Surface (S7) (LRR G)
Hydrogen Sulfide (A4)		Loamy Mucky	` '		High Plains Depressions (F16)
Stratified Layers (A5) (LRR F)		Loamy Gleye			(LRR H outside of MLRA 72 & 73)
X 1 cm Muck (A9) (LRR F, G, H)		Depleted Mat	` ,	ı	Reduced Vertic (F18)
Depleted Below Dark Surface (A11)		Redox Dark S	Surface (F6)	 -	Red Parent Material (TF2)
Thick Dark Surface (A12)		Depleted Dar	k Surface (F7)		Other (Explain in Remarks)
Sandy Mucky Mineral (S1)		Redox Depre	ssions (F8)	3Indicat	ors of hydrophylic vegetation and
2.5 cm Mucky Peat or Peat (S2) (LRR G,	H)	High Plains D	epressions (F16)		I hydrology must be present, unless
5 cm Mucky Peat or Peat (S3) (LRR F)		MLRA 72 &	73 of LRR H)	disturb	ed or problematic.
Restrictive Layer: (if observed)					
Type:					
Depth (inches):				Hydric So	il Present? Yes X No
<u> </u>				I iyano oo	163 <u>X</u> No
Remarks:					
HYDROLOGY					
Wetland Hydrology Indicators:					
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; c	heck all that ap	ply)	S	econdary Indicato	rs (minimum of two required)
		<i>ply)</i> Crust (B11)	s	secondary Indicato	rs (minimum of two required) Surface Soil Cracks (B6)
Primary Indicators (minimum of one is required; c	Salt			Secondary Indicato	, ,
Primary Indicators (minimum of one is required; c	Salt	Crust (B11)	3)	Secondary Indicato	Surface Soil Cracks (B6)
Primary Indicators (minimum of one is required; c Surface Water (A1) High Water Table (A2)	Salt Aqu	Crust (B11) atic Fauna (B1	3) Odor (C1)	Secondary Indicato	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Primary Indicators (minimum of one is required; c Surface Water (A1) High Water Table (A2) Saturation (A3)	Salt Aqui Hydi Dry-	Crust (B11) atic Fauna (B1 rogen Sulfide (Season Water	3) Odor (C1)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Primary Indicators (minimum of one is required; c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Salt Aqui Hydi Dry-	Crust (B11) atic Fauna (B1 rogen Sulfide (Season Water	3) Odor (C1) Table (C2)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Primary Indicators (minimum of one is required; construction Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Salt Aqui Hydi Dry- Oxidi	Crust (B11) atic Fauna (B1 rogen Sulfide (Season Water zed Rhizosphere	3) Odor (C1) Table (C2) es on Living Roots (C3)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Primary Indicators (minimum of one is required; consumption of surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Salt Aqui Hydi Dry- Oxidi (who	Crust (B11) atic Fauna (B1 rogen Sulfide (Season Water zed Rhizosphere ere not tilled)	3) Odor (C1) Table (C2) es on Living Roots (C3) ced Iron (C4)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Primary Indicators (minimum of one is required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4)	Salt Aqui Hydi Dry- Oxidi (who	Crust (B11) atic Fauna (B1 rogen Sulfide (Season Water zed Rhizosphere ere not tilled) sence of Reduce	3) Odor (C1) Table (C2) es on Living Roots (C3) ced Iron (C4)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Primary Indicators (minimum of one is required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5)	Salt Aqui Hydi Dry- Oxidi (who	Crust (B11) atic Fauna (B1 rogen Sulfide (Season Water zed Rhizosphere ere not tilled) sence of Reduc	3) Odor (C1) Table (C2) es on Living Roots (C3) ced Iron (C4)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Primary Indicators (minimum of one is required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)	Salt Aqui Hydi Dry- Oxidi (who	Crust (B11) atic Fauna (B1 rogen Sulfide (Season Water zed Rhizosphere ere not tilled) sence of Reduct Muck Surface	3) Odor (C1) Table (C2) es on Living Roots (C3) ced Iron (C4)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Primary Indicators (minimum of one is required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)	Salt Aqui Hydi Dry- Oxidi (who	Crust (B11) atic Fauna (B1 rogen Sulfide (Season Water zed Rhizosphere ere not tilled) sence of Reduct Muck Surface	3) Odor (C1) Table (C2) es on Living Roots (C3) ced Iron (C4)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Primary Indicators (minimum of one is required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations:	Salt Aque Hydi Dry- Oxidi (whe Pres X Thin	Crust (B11) atic Fauna (B1 rogen Sulfide (Season Water zed Rhizosphere ere not tilled) sence of Reduc Muck Surface er (Explain in F	3) Odor (C1) Table (C2) es on Living Roots (C3) ced Iron (C4) e (C7) Remarks)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Primary Indicators (minimum of one is required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present?	Salt Aqui Hydi Dry- Oxidi (whe Pres X Thin Othe	Crust (B11) atic Fauna (B1 rogen Sulfide (Season Water zed Rhizosphere ere not tilled) sence of Reduc Muck Surface er (Explain in F	3) Ddor (C1) Table (C2) es on Living Roots (C3) ced Iron (C4) (C7) Remarks) Depth (inches)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Primary Indicators (minimum of one is required; of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Water Table Present?	Salt Aqua Hydi Dry- Oxidi (who Pres X Thin Othe Yes Yes	Crust (B11) atic Fauna (B1 rogen Sulfide (Season Water zed Rhizosphere ere not tilled) sence of Reduc Muck Surface er (Explain in R	Dodor (C1) Table (C2) es on Living Roots (C3) ced Iron (C4) c(C7) Remarks) Depth (inches) Depth (inches)		Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology Present?

Wetland Determination	on Data Form	- Great Plains Reg	ion	
Project/Site: I-25/I-80 Interchange	City/County: Chey	yenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Transportation		State: WY	Sampling Point:	S-47B
Investigator(s): R. Newton, D. Soucy		Section	, Township, Range: S2	T13N R67W
Landform (hillslope, terrace, etc.): depression	Local Relief (cor	ncave, convex, none):	concave	Slope (%):
Subregion (LRR): G - Western Great Plains		31.4587 Long:	743882.1057	Datum: WY E
Soil Map Unit Name: Poposhia-Trimad complex, 3 to 15 percen	t slopes	N	WI Classification:	UPL
Are climatic/hydrologic conditions on the site typical for this time of	of year? Yes	X No(/	f no, explain in Remarks	5)
Are Vegetation, Soil, or Hydrologysigni	ficantly disturbed? Ar	e "Normal Circumstances	" present? Yes	X No
Are Vegetation, Soil, or Hydrologynatur	rally problematic?	(If needed, ex	plain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, tra	ansects, important featu	res, etc.	
Hydrophytic Vegetation Present? Yes X No				
Hydric Soil Present? Yes X No	Is the San	npled Area within a Wetla	nd? Yes	X No
Wetland Hydrology Present? Yes X No		•	_	
Remarks:				
Daniera i mali nativativa amangant wattan d DEM 450 in an /aff nam		hands to DEM 45A and DE	M 45D	
Depressional palustrine emergent wetland PEM-15C in on/off-ram	ips connected via cui	verts to PEIN-15A and PE	.WI- 15B.	
VEGETATION - Use scientific names of plants.		D ! T 4 \	L 4-	
Absolute Dom Tree Stratum (Plot size: 30x30 ft) % Cover Spec	inant Indicator cies? Status	Dominance Test Works Number of Dominant Spe		
1	Jos. Galas	That Are OBL, FACW, or		1 (A)
2.		(excluding FAC-):		. (1.1)
3.		Total Number of Dominar	nt	
4.		Species Across All Strata		1 (B)
5.				
0 = Total <u>Sapling/Shrub Stratum</u> (Plot size: 15x15 ft) 1	Cover	Percent of Dominant Spe That Are OBL, FACW, or		100% (A/B)
2		Prevalence Index Works	sheet:	
3		Total % Cover	of:	Multiply by:
4		OBL species	0 x 1 =	
5		FACW species	85 x 2 =	
0 = Total		FAC species	0 x 3 =	
Herb Stratum (Plot size: 5x5 ft)		FACU species	0 x 4 =	
<u> </u>	FACW_	UPL species Column Totals:	$0 \times 5 = 85$ (A)	0 170 (B)
2. 3.			85 (A) lence Index = B/A =	170 (B) 2.0
4.		Hydrophytic Vegetation		2.0
5.			est for Hydrophytic Vege	tation
6.			ice Test is >50%.	
7.		X 3. Prevalen	ice Index is <3.01	
8. 9.		· ·	ogical Adaptations¹ (Provain Remarks or on a se	•
		Problemation	c Hydrophytic Vegetation	n (Explain)
85 = Total	Cover		, , , , ,	, ,
Woody Vine Stratum (Plot size: 30x30 ft)				
1.		¹ Indicators of hydi	ric soil and wetland hydrol	ngy must he
2.			sturbed or problematic.	ogy must be
0 = Tot	tal Cover			
% Bare Ground in Herb Stratum 15 %		Hydrophytic Vege	tation Present?	X YesNo
Remarks:				

Profile Desc	ription: (Describe t	o the depth	needed to docu	ment the i	ndicator or	confirm the absen	ce of indicators.)		
Depth	Matrix			Redox	Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	10 YR 3/1	100					clay		
8-16	10 YR 6/2	80	2.5 Y 5/6	20	С	М	Sandy Clay		
¹ Type: C=Co	ncentration, D=Dep	oletion, RM	=Reduced Matrix	, CS=Cov	ered or Co	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix	
Hydric Soil I	ndicators							rs for Problematic Hydric	Soils ³ :
1 -	sol (A1)			San	dv Gleved	Matrix (S4)		cm Muck (A9) (LRR I, J)	
	Epipedon (A2)		•		dy Redox (oast Prairie Redox (A16) (L	RR F. G. H)
	Histic (A3)		•		ped Matrix	,		ark Surface (S7) (LRR G)	, -,,
	gen Sulfide (A4)		•			Mineral (F1)		igh Plains Depressions (F1	6)
	ied Layers (A5) (LF	RR F)	•			Matrix (F2)	 "	(LRR H outside of MLRA 7	
	Muck (A9) (LRR F,	•	•		leted Matri		R	educed Vertic (F18)	,
	ted Below Dark Sur		•		ox Dark Su	, ,		ed Parent Material (TF2)	
	Dark Surface (A12)		•			Surface (F7)		ther (Explain in Remarks)	
_	/ Mucky Mineral (S		•		ox Depress	` '		ors of hydrophylic vegetation	on and
	n Mucky Peat or Pe	•	RR G, H)	—— High	n Plains De	pressions (F16)		hydrology must be presen	
5 cm	Mucky Peat or Peat	t (S3) (LRF	R F)	(M	ILRA 72 & 7	3 of LRR H)	disturbe	d or problematic.	
Restrictive I	.ayer: (if observed)								
Type:	ayer. (" observed)								
Depth (incl	hes):						Hydric Soi	I Present? Yes X	No
							Tryuno con	111000III. 103 <u>X</u>	
Remarks:									
HYDROLOG	Υ								
Wetland Hyd	Irology Indicators:								
Primary Indic	ators (minimum of o	one is requ	ired; check all tha	at apply)		S	econdary Indicator	rs (minimum of two requi	ired)
Surfac	ce Water (A1)			Salt Crus	t (B11)			Surface Soil Cracks (B	6)
High \	Water Table (A2)			Aquatic F	auna (B13)		Sparsley Vegetated Concave	e Surf. (B8)
Satura	ation (A3)			Hydrogen	Sulfide O	dor (C1)		_Drainage Patterns (B1)	<i>'</i>
Water	Marks (B1)			Dry-Seas	on Water T	able (C2)		Oxidized Rhizospheres Roots (C3) (where tille	•
	nent Deposits (B2)			Oxidized R	hizospheres	on Living Roots (C3)		, , ,	su)
Drift D	Deposits (B3)			(where n	ot tilled)			Crayfish Burrows (C8)	
X Algal	Mat or Crust (B4)			Presence	of Reduce	ed Iron (C4)		Saturation Visible on Aeria	al Imagery (C9)
Iron D	eposits (B5)			Thin Muc	k Surface (C7)	X	Geomorphic Position (D2)
Inund	ation Visible on Aer	ial Imagery	/ (B7)	Other (Ex	plain in Re	marks)	X	FAC-Neutral Test (D5)	
Water	r-Stained Leaves (B	9)						Frost-Heave Hummocks (D7) (LRR F)
Field Observ	rations:								
Surface Wate	er Present?		Yes		No X	Depth (inches)		Wetland Hyd	
Water Table	Present?		Yes		No X	Depth (inches)		Present	?
Saturation Pr	esent? <i>(includes ca</i>	pillary fring	ge) Yes	Χ	No	Depth (inches)	surface	X Yes	No
Remarks:									
I									

Wetland D	Determination	n Data Fori	m - Great	Plains Regior	ı	
Project/Site: I-25/I-80 Interchange		City/County: Ch	neyenne/Lara	mie	Sampling Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Train	nsportation			State: WY	Sampling Point:	S-48
Investigator(s): R. Newton, D. Soucy				Section, To	ownship, Range: S1	T13N R67W
Landform (hillslope, terrace, etc.): ditch slo	рре	Local Relief (d	concave, con	vex, none): no	ne	Slope (%): 0-2
Subregion (LRR): <u>G - Western Great Plair</u>	าร	Lat. 226	479.3027	Long:	744498.6668	Datum: WY E
Soil Map Unit Name: <u>Urban land-Evanston co</u>	omplex, 0 to 6 percer	nt slopes		NWI	Classification:	UPL
Are climatic/hydrologic conditions on the site ty	pical for this time of	year? Ye	s X	No (If no	, explain in Remarks	s)
Are Vegetation , Soil , or Hyd	rology signific	antly disturbed?	Are "Normal	Circumstances" pr	esent? Yes	X No
Are Vegetation , Soil , or Hyd	rology natural	lly problematic?		(If needed, explai	in any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map s	showing sampling p	point locations,	transects, in	portant features	etc.	
Hydrophytic Vegetation Present? Yes	No X	· · · · · · · · · · · · · · · · · · ·	,			
Hydric Soil Present? Yes	No X	Is the S	ampled Area	within a Wetland?	Yes	No X
Wetland Hydrology Present? Yes	No X	.55 5	шр.оч / шоч		-	
Remarks:						
Paired upland point for PEM-15A.						
VEGETATION - Use scientific names of plan	ts.		<u> </u>			
<u>Tree Stratum</u> (Plot size: 30x30 ft)	Absolute Domina % Cover Specie			e Test Workshee Dominant Specie		
1	70 GOVEI OPEGIC	o: Claido		BL, FACW, or FA		0 (A)
2			(excluding			(A)
3.			Total Num	har of Dominant		
4.				ber of Dominant cross All Strata:		1 (B)
5.		_				. (5)
Sapling/Shrub Stratum (Plot size: 15x15	0 = Total C	over		Dominant Species BL, FACW, or FA		0% (A/B)
2.			Prevalenc	e Index Workshe	et:	
3.			T	otal % Cover of:		Multiply by:
4.			OBL sp	pecies	0 x 1 =	0
5.			FACW sp	pecies	15 x 2 =	
	0 = Total C	over	FAC sp	pecies	0 x 3 =	
Herb Stratum (Plot size: 5x5 ft)				pecies	0 x 4 =	
1. Bromus inermis	70 Y	UPL_		pecies	70 x 5 =	
2. Phalaris arundinacea	15N	FACW	Column To		<u>85</u> (A)	380 (B)
3					ce Index = B/A =	4.5
4			Hydrophy	tic Vegetation Inc		
5			_		or Hydrophytic Vege	tation
6			_	2. Dominance		
7			_	3. Prevalence	index is <u><</u> 3.0¹ :al Adaptations¹ (Pro¹	vido oup
8.			_		Remarks or on a se	•
9				. •	,	,
10	85 = Total C	over	_	Problematic H	/drophytic Vegetatio	ii (⊏xpiaiii)
Woody Vino Stratum (Diet size: 20v20 ft		ovei				
Woody Vine Stratum (Plot size: 30x30 ft	·)		1.			
2					oil and wetland hydrol	ogy must be
	0 = Total	Cover	pr	esent, unless distur	oed or problematic.	
% Bare Ground in Herb Stratum 15		JOVEI	н	drophytic Vegetati	on Present?	Yes X No
Remarks:						

Profile Desc								
Depth	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	10 YR 3/2	100					sand	50% road fill
								_
								_
								_
¹ Type: C=Co	oncentration, D=Deple	etion, RM=F	Reduced Matrix,	CS=Cove	red or Coate	ed Sand Grains.	² Location: Pl	L=Pore Lining, M=Matrix
Hydric Soil I	Indicators						Indica	ators for Problematic Hydric Soils ³ :
-	sol (A1)			Sand	/ Gleyed Ma	trix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		Redox (S5		<u></u>	Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		_		ed Matrix (S	,		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)		_		y Mucky Min			High Plains Depressions (F16)
	fied Layers (A5) (LRF	₹ F)	_		y Gleyed Ma			(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, G		_		ted Matrix (F			Reduced Vertic (F18)
	eted Below Dark Surfa		_		k Dark Surfa	-		Red Parent Material (TF2)
	Dark Surface (A12)	100 (7111)	_		ted Dark Su	` '		Other (Explain in Remarks)
	y Mucky Mineral (S1)		-		K Depression		3	_
					•	essions (F16)		rators of hydrophylic vegetation and nd hydrology must be present, unless
250			ι O, 11/		iairis Depre	3310113 (1 10)		
	m Mucky Peat or Peat		_	(MI	RA 72 & 73 of	FIRR HI	aistui	bed or problematic.
	Mucky Peat or Peat (_	(ML	RA 72 & 73 of	f LRR H)	distur	bed or problematic.
5 cm	-		_	(ML	RA 72 & 73 of	f LRR H)	distur	bed or problematic.
5 cm	Mucky Peat or Peat (_	(ML	RA 72 & 73 of	f LRR H)	distur	bed or problematic.
5 cm	Mucky Peat or Peat (_ayer: (if observed)		_	(ML	RA 72 & 73 of	f LRR H)		Soil Present? Yes No _X
5 cm Restrictive I Type:	Mucky Peat or Peat (_ayer: (if observed)		_	(ML	RA 72 & 73 of	f LRR H)		
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat (_ayer: (if observed)		_	(ML	RA 72 & 73 of	f LRR H)		
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat (_ayer: (if observed)		_	(ML	RA 72 & 73 of	f LRR H)		
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat (_ayer: (if observed) :hes):		_	(ML	RA 72 & 73 of	f LRR H)		
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat (Layer: (if observed) Shes): Y drology Indicators:	(S3) (LRR F			RA 72 & 73 of		Hydric S	Soil Present? Yes No X
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat (_ayer: (if observed) thes):	(S3) (LRR F			RA 72 & 73 of		Hydric S	
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat (Layer: (if observed) Shes): Y drology Indicators:	(S3) (LRR F	ed; check all that				Hydric S	Soil Present? Yes No X
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	Mucky Peat or Peat (_ayer: (if observed) _hes): Y drology Indicators: eators (minimum of on	(S3) (LRR F	ed; check all that	apply)	(B11)		Hydric S	Soil Present? Yes No X tors (minimum of two required)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High	Mucky Peat or Peat (_ayer: (if observed) thes): Y drology Indicators: cators (minimum of once Water (A1)	(S3) (LRR F	ed; check all that	<i>apply)</i> Salt Crust (Aquatic Fa	(B11)	Se	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High Satur	Mucky Peat or Peat (Layer: (if observed) Thes): Order of the control of the c	(S3) (LRR F	ed; check all that	apply) Salt Crust (Aquatic Fa	(B11) una (B13)	Se (C1)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Mucky Peat or Peat (Layer: (if observed) Thes): Y drology Indicators: cators (minimum of once Water (A1) Water Table (A2) cation (A3)	(S3) (LRR F	ed; check all that	<i>apply)</i> Salt Crust (Aquatic Fa Hydrogen S Dry-Season	(B11) una (B13) Sulfide Odor n Water Tab	Se (C1)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High Satur Wate Sedir	Mucky Peat or Peat (Layer: (if observed) Thes): Y drology Indicators: cators (minimum of on one Water (A1) Water Table (A2) cation (A3) r Marks (B1)	(S3) (LRR F	ed; check all that	<i>apply)</i> Salt Crust (Aquatic Fa Hydrogen S Dry-Season	(B11) una (B13) Sulfide Odor n Water Tab zospheres on	(C1) le (C2)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High Satur Wate Sedir Drift I	Mucky Peat or Peat (Layer: (if observed) Thes): Order of the control of the c	(S3) (LRR F	ed; check all that	f apply) Salt Crust (Aquatic Fallydrogen Solory-Seasol	(B11) una (B13) Sulfide Odor n Water Tab zospheres on	Set (C1) le (C2) Living Roots (C3)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	Mucky Peat or Peat (Layer: (if observed) Thes): Y drology Indicators: cators (minimum of on one Water (A1) Water Table (A2) cation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3)	(S3) (LRR F	ed; check all that	f apply) Salt Crust (Aquatic Fa Hydrogen S Dry-Season Dxidized Rhi where not	(B11) una (B13) Sulfide Odor n Water Tab zospheres on t tilled)	(C1) le (C2) Living Roots (C3) ron (C4)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I	Mucky Peat or Peat (Layer: (if observed) Thes): Y drology Indicators: Cators (minimum of on one Water (A1) Water Table (A2) Cation (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	ne is require	ed; check all that	apply) Salt Crust (Aquatic Faralydrogen Sory-Season Oxidized Rhi where not Presence of	(B11) una (B13) Sulfide Odor n Water Tab zospheres on t tilled) of Reduced I	(C1) le (C2) Living Roots (C3) ron (C4)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
5 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I	Mucky Peat or Peat (Layer: (if observed) Thes): Adrology Indicators: Eators (minimum of one of the order (A1) Water Table (A2) Eation (A3) In Marks (B1) In Marks (B1) In Marks (B3) Mat or Crust (B4) Deposits (B5)	ne is require	ed; check all that	apply) Salt Crust (Aquatic Faralydrogen Sory-Season Oxidized Rhi where not Presence of	(B11) una (B13) Sulfide Odor n Water Tab zospheres on t tilled) of Reduced I Surface (C7	(C1) le (C2) Living Roots (C3) ron (C4)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
5 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I	Mucky Peat or Peat (Layer: (if observed) Thes): Adrology Indicators: Cators (minimum of one of the or	ne is require	ed; check all that	apply) Salt Crust (Aquatic Faralydrogen Sory-Season Oxidized Rhi where not Presence of	(B11) una (B13) Sulfide Odor n Water Tab zospheres on t tilled) of Reduced I Surface (C7	(C1) le (C2) Living Roots (C3) ron (C4)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate	Mucky Peat or Peat (Layer: (if observed) Thes): Ty Chrology Indicators: Eators (minimum of on one of on	ne is require	ed; check all that	apply) Salt Crust (Aquatic Fa Hydrogen S Dry-Season Dxidized Rhi where not Presence of Thin Muck Other (Exp	(B11) una (B13) Sulfide Odor n Water Tab zospheres on t tilled) of Reduced I Surface (C7	(C1) le (C2) Living Roots (C3) ron (C4)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate	Mucky Peat or Peat (Layer: (if observed) Thes): Thes): Adrology Indicators: Eators (minimum of one of the order (A1) Water Table (A2) Eation (A3) In Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Eation Visible on Aeria In-Stained Leaves (B9 Vations: Ear Present?	ne is require	ed; check all that	Fapply) Salt Crust (Aquatic Fallydrogen Solvidized Rhi where not of the Presence of the County of t	(B11) una (B13) Sulfide Odor n Water Tab zospheres on t tilled) of Reduced I Surface (C7 lain in Rema	(C1) le (C2) Living Roots (C3) ron (C4))	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate Field Observ Surface Wate Water Table	Mucky Peat or Peat (Layer: (if observed) Thes): Thes): Adrology Indicators: Eators (minimum of one of the order (A1) Water Table (A2) Eation (A3) In Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Eation Visible on Aeria In-Stained Leaves (B9 Vations: Ear Present?	al Imagery (I	ed; check all that B7) Yes Yes Yes	apply) Salt Crust (Aquatic Faralydrogen S Dry-Season Dxidized Rhi Where not Presence of Thin Muck Dther (Exp	(B11) una (B13) Sulfide Odor n Water Tab zospheres on t tilled) of Reduced I Surface (C7 lain in Rema	(C1) le (C2) Living Roots (C3) ron (C4)) urks)	Hydric S	tors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology

Wetland Determin	ation Data Fo	orm - Grea	t Plains Regi	on		
Project/Site: I-25/I-80 Interchange	City/County:	Cheyenne/Lar	amie	Sampling Date	e: 7/31/201	19
Applicant/Owner: Wyoming Dept. of Transportation			State: WY	Sampling Point	t: S-49	
Investigator(s): R. Newton, D. Soucy			Section	, Township, Range: <u>S</u>	336 T14N R67W	N
Landform (hillslope, terrace, etc.): depression/fringe	Local Relie	f (concave, cor	nvex, none):	concave	Slope (%): 0	0-1
Subregion (LRR): G - Western Great Plains	Lat2	231059.9227	Long:	745833.7288	Datum: WY	ΥE
Soil Map Unit Name: Urban land-Merden complex, 0 to 3 p	ercent slopes		N	WI Classification:	Riverine	
Are climatic/hydrologic conditions on the site typical for this t	ime of year?	Yes X	No(//	f no, explain in Rema	rks)	
Are Vegetation, Soil, or Hydrology	significantly disturbed	d? Are "Norma	l Circumstances'	present? Yes	_X_ No	lo
Are Vegetation , Soil , or Hydrology	naturally problematic	?	(If needed, exp	plain any answers in l	Remarks.)	
SUMMARY OF FINDINGS - Attach site map showing sam	pling point location	ıs, transects, i	mportant featur	es, etc.		
Hydrophytic Vegetation Present? Yes X No			-			
Hydric Soil Present? Yes X No	Is the	e Sampled Area	a within a Wetlar	nd? Yes	s X No	
Wetland Hydrology Present? Yes X No		•				_
Remarks:						
Depressional/fringe palustrine emergent wetland PEM-16 alc	ong PS-1 Crow Creek	k. Located unde	er I-25 bridges.			
VEGETATION - Use scientific names of plants.						
Absolute	Dominant Indicato		ce Test Worksh			
<u>Tree Stratum</u> (Plot size: 30x30 ft) % Cover	Species? Status		of Dominant Spe OBL, FACW, or		4	(*)
1		(excluding			1	(A)
2		— [
3			nber of Dominan Across All Strata		1	(D)
5		— Species /	ACIOSS All Stiata	<u> </u>		(B)
	Total Cover	- <u> </u>				
Sapling/Shrub Stratum (Plot size: 15x15 ft)			of Dominant Spec OBL, FACW, or		100% ((A/B)
1			022,	_		(,,,,,
2.		Prevalen	ce Index Works	sheet:		
		- ` ` ` .	Total % Cover	of:	Multiply by	/ :
4.		OBL s	species	0 x 1		
5.		FACW s	species	30 x 2	2 = 60	_
0 =	Total Cover	FAC s	species	0 x 3	3 = 0	_
Herb Stratum (Plot size: 5x5 ft)		FACU s	species	0 x 4	4 = 0	_
1. Phalaris arundinacea 30	Y FACW	V UPL s	species	0 x 5	5 = 0	
2.		Column 7	otals:	30 (A	A) 60	(B)
3.			Preval	ence Index = B/A =	2.0	
4		Hydroph	ytic Vegetation	Indicators:		
5		_	X 1. Rapid Te	st for Hydrophytic Ve	getation	
6		_		ce Test is >50%.		
7		_		ce Index is <3.01		
8		_	•	ogical Adaptations¹ (P	•	
9				in Remarks or on a s)
0		_ -	Problematic	: Hydrophytic Vegetat	tion (Explain)	
	Total Cover					
Woody Vine Stratum (Plot size: 30x30 ft)						
1				ic soil and wetland hyd		
2	T-4-1-0	_	present, unless dis	turbed or problematic.		
	= Total Cover		hadaaab 2000 S	tation During 12	V	
% Bare Ground in Herb Stratum 70 %		'	Hydrophytic Vege	tation Present?	X Yes	No
Daniel						
Remarks:						

	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10 YR 3/2	100					clay	
2-3	10 YR 3/2	100					sand	
3-8	10 YR 5/2	97	7.5 YR 4/6	3	С	M	Clay	
8-16	10 YR 5/2	80	7.5 YR 4/6	20	С	M	Sand	
¹Type: C=Co	oncentration, D=Dep	letion, RM:	=Reduced Matrix,	CS=Cove	ered or Coa	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil I	Indicators						Indicato	rs for Problematic Hydric Soils ³ :
Histo	sol (A1)		_	Sand	y Gleyed N	Matrix (S4)	1	cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)		_	Sand	y Redox (S	S5)	c	oast Prairie Redox (A16) (LRR F, G, H)
Black	(Histic (A3)		_	Stripp	oed Matrix	(S6)		ark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)		_	Loam	y Mucky N	/lineral (F1)	——	igh Plains Depressions (F16)
Strati	fied Layers (A5) (LR	RF)	_	X Loam	ıy Gleyed I	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F,	G , H)	_	Deple	eted Matrix	(F3)	R	educed Vertic (F18)
X Deple	eted Below Dark Sur	face (A11)	_	Redo	x Dark Su	rface (F6)	R	ed Parent Material (TF2)
Thick	Dark Surface (A12))	_	Deple	eted Dark S	Surface (F7)	c	ther (Explain in Remarks)
Sand	y Mucky Mineral (S1	l)	_	Redo	x Depress	ions (F8)	³ Indicate	ors of hydrophylic vegetation and
2.5 cr	m Mucky Peat or Pe	at (S2) (LR	≀R G, H)	High	Plains Dep	oressions (F16)	wetland	hydrology must be present, unless
5 cm	Mucky Peat or Peat	(S3) (LRR	(F)	(ML	.RA 72 & 73	of LRR H)	disturbe	d or problematic.
Restrictive I	Layer: (if observed)							
Restrictive I	_ayer: (if observed)							
							Hydric Soi	I Present? Yes X No
Type: Depth <i>(inc</i>							Hydric Soi	I Present? Yes X No
Туре:							Hydric Soi	I Present? Yes X No
Type: Depth (inc	ches):						Hydric Soi	I Present? Yes X No
Type: Depth (inco Remarks: HYDROLOG	rhes):						Hydric Soi	I Present? Yes X No
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd	erhes): EY drology Indicators:		red: check all that	apply)		s		
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	ery drology Indicators:				(B11)	s		s (minimum of two required)
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	drology Indicators: cators (minimum of cators (M1)		s	alt Crust	` '			s (minimum of two required) Surface Soil Cracks (B6)
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High	ches): drology Indicators: cators (minimum of conce Water (A1) Water Table (A2)		S	alt Crust quatic Fa	iuna (B13)			s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	drology Indicators: cators (minimum of cators (A1) Water Table (A2)		S A H	alt Crust quatic Fa	iuna (B13) Sulfide Od	or (C1)		s (minimum of two required) Surface Soil Cracks (B6)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	drology Indicators: cators (minimum of cace Water (A1) Water Table (A2) cation (A3)		S A H	alt Crust quatic Fa lydrogen ry-Seaso	una (B13) Sulfide Od n Water T	or (C1) able (C2)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	drology Indicators: cators (minimum of cace Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2)		S A F C	alt Crust quatic Fa lydrogen bry-Seaso xidized Rh	una (B13) Sulfide Od n Water T	or (C1)	econdary Indicator	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I	drology Indicators: cators (minimum of cators (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3)		S	calt Crust quatic Fa lydrogen Ory-Seaso oxidized Rh	nuna (B13) Sulfide Od n Water T izospheres t tilled)	or (C1) able (C2) on Living Roots (C3)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal	drology Indicators: cators (minimum of cators (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)		S 	calt Crust equatic Fa dydrogen s Dry-Seaso exidized Rh where no	suna (B13) Sulfide Od n Water T izospheres t tilled)	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicator	S (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I	ches): drology Indicators: cators (minimum of conce Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	one is requi	S P C (\(calt Crust equatic Fa elydrogen ey-Seaso exidized Rh eyhere no eyesence of thin Muck	suna (B13) Sulfide Od n Water T izospheres t tilled) of Reducee Surface (0	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund	drology Indicators: cators (minimum of cators (Marks (Mark	one is requi	S P C (\(calt Crust equatic Fa elydrogen ey-Seaso exidized Rh eyhere no eyesence of thin Muck	suna (B13) Sulfide Od n Water T izospheres t tilled)	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate	drology Indicators: cators (minimum of cators (Marks (Mark	one is requi	S P C (\(calt Crust equatic Fa elydrogen ey-Seaso exidized Rh eyhere no eyesence of thin Muck	suna (B13) Sulfide Od n Water T izospheres t tilled) of Reducee Surface (0	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate	drology Indicators: cators (minimum of cators (Minimum of cators (Minimum of cators (Marks (M	one is requi	S A A A A A A A A A A A A A A A A A A A	calt Crust equatic Fa elydrogen ey-Seaso exidized Rh eyhere no eyesence of thin Muck	suna (B13) Sulfide Od n Water T izospheres t tilled) of Reducee Surface (to	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate Field Observ Surface Wate	ches): drology Indicators: cators (minimum of conce Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aerications: care Present?	one is requi	S P C (\(calt Crust equatic Fa equatic Fa elydrogen in elydrogen i	Sulfide Od n Water T izospheres t tilled) of Reduced Surface (0	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate Field Observ Surface Wate Water Table	ches): drology Indicators: cators (minimum of conce Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aericator-Stained Leaves (Bay) vations: er Present? Present?	ial Imagery	YesYes	calt Crust equatic Fa equatic Fa elydrogen in elydrogen i	Sulfide Od n Water T. izospheres t tilled) of Reducer Surface (0 olain in Ren	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks) Depth (inches) Depth (inches)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology Present?
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate Field Observ Surface Wate Water Table	ches): drology Indicators: cators (minimum of conce Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aerications: care Present?	ial Imagery	YesYes	calt Crust cquatic Fa lydrogen ry-Seaso exidized Rh where no resence of thin Muck other (Exp	Sulfide Od n Water T. izospheres t tilled) of Reducer Surface (0 olain in Ren	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	econdary Indicator	s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology

Wetland	Determinati	ion Data	a Form - Gr	eat Plains Re	egion	
Project/Site: I-25/I-80 Interchange		City/Co	ounty: Cheyenne	/Laramie	Sampling Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Ti	ansportation			State: V	VY Sampling Point:	S-50
Investigator(s): R. Newton, D. Soucy				Sect	tion, Township, Range: S	36 T14N R67W
Landform (hillslope, terrace, etc.): terrace	е	Local	Relief (concave,	convex, none):	convex	Slope (%): 0-3
Subregion (LRR): G - Western Great Pla	ains	Lat.	231062.50	Long	: 745813.8199	Datum: WY E
Soil Map Unit Name: Urban land-Merden co	omplex, 0 to 3 perc	ent slopes			NWI Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for this time	e of year?	Yes>	(No	_(If no, explain in Remar	ks)
Are Vegetation, Soil, or Hy	ydrologysign	nificantly dis	sturbed? Are "No	mal Circumstand	ces" present? Yes	X No
Are Vegetation , Soil , or Hy	ydrology nat	urally proble	ematic?	(If needed,	explain any answers in F	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing samplir	ng point lo	cations, transec	s, important fea	atures, etc.	
Hydrophytic Vegetation Present? Yes	No X			-		
Hydric Soil Present? Yes	No X		Is the Sampled	Area within a We	tland? Yes	No X
Wetland Hydrology Present? Yes	No X		•			
Remarks:	<u> </u>					
Paired upland point for PEM-16.						
VEGETATION - Use scientific names of pla	ants.					
			a.oato.	nance Test Wor		
<u>Tree Stratum</u> (Plot size: 30x30 ft)	% Cover Sp	ecies?		er of Dominant S	•	
1.				Are OBL, FACW, Iding FAC-):	or FAC:	0 (A)
2				iding i AC-).		
3.				Number of Domi		
4			Speci	es Across All Str	rata:	3 (B)
5						
Sapling/Shrub Stratum (Plot size: 15x	0 = Tota 15 ft)	al Cover		nt of Dominant S Are OBL, FACW,	•	0% (A/B)
2			Preva	lence Index Wo	rksheet	
3.				Total % Cov		Multiply by:
4.			OBL	species	0 x 1	
5.			FACV	•	7 x 2	
	0 = Tota	al Cover	FAC	species	0 x 3	= 0
Herb Stratum (Plot size: 5x5 ft)			FACL	I species	45 x 4	
1. Bromus inermis	20	Υ	UPL UPL	species	38 x 5	= 190
2. Euphorbia esula	18	Υ	NI Colur	nn Totals:	90 (A	384 (B)
3. Alopecurus pratensis	7	N	FACW	Pre	evalence Index = B/A =	4.3
4. Elymus repens	45	Υ	FACU Hydr	phytic Vegetati	on Indicators:	
5.				1. Rapid	Test for Hydrophytic Veg	getation
6.				2. Domir	nance Test is >50%.	
7.				3. Preva	lence Index is ≤3.01	
8.				•	nological Adaptations¹ (Pr	•
9.				porting o	data in Remarks or on a s	separate sheet)
0.				Problem	atic Hydrophytic Vegetati	ion (Explain)
	90 = Tota	al Cover				
Woody Vine Stratum (Plot size: 30x30	ft)					
1				¹ Indicators of h	nydric soil and wetland hydr	ology must be
2				present, unless	disturbed or problematic.	
_		otal Cover				
% Bare Ground in Herb Stratum	10%			Hydrophytic V	egetation Present?	Yes X No
Remarks:			•			
Species with no indicator (NI) are treated as	UPL for this analys	is.				

/· · · ·	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	10 YR 4/3	100					sand	some cobbles
								_
								_
¹Tvpe: C=Cc	oncentration, D=Depl	etion. RM=f	Reduced Matrix,	CS=Cove	red or Co	pated Sand Grains.	² Location: P	L=Pore Lining, M=Matrix
Hydric Soil I	<u> </u>		,					rators for Problematic Hydric Soils ³ :
_	sol (A1)			Sand	. Gleved	Matrix (S4)	muic	1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		y Gleyeu y Redox (Coast Prairie Redox (A16) (LRR F, G, H)
	: Epipedon (A2)		_		y Redox (ed Matrix	,		-
	ogen Sulfide (A4)		_			Mineral (F1)		Dark Surface (S7) (LRR G) High Plains Depressions (F16)
	fied Layers (A5) (LR	D E/	_			Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, (,	_		y Gleyed ted Matri			Reduced Vertic (F18)
	eted Below Dark Surf		_			urface (F6)		Red Parent Material (TF2)
	Dark Surface (A12)	acc (Fill)	_			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S1	١	_			sions (F8)	31	_
	m Mucky Peat or Pea		_ ≥ G. H)			pressions (F16)		cators of hydrophylic vegetation and and hydrology must be present, unless
	Mucky Peat or Peat		_			3 of LRR H)		rbed or problematic.
		() (,	`	••• · · · · · · · · · · · · · · · · · ·			
							I .	
	_ayer: (if observed)							
Туре:								· · · · · · · · · · · · · · · · ·
							Hydric :	Soil Present? Yes No _X
Туре:							Hydric	Soil Present? Yes No X
Type: Depth (inc							Hydric :	Soil Present? Yes No X
Type: Depth (inc.	hes):						Hydric	Soil Present? Yes No X
Type: Depth (inc.) Remarks: HYDROLOG	hes):						Hydric :	Soil Present? Yes No X
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd	hes): Y drology Indicators:	ne is require	ed: check all that	apply)		s		
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic	Y drology Indicators: eators (minimum of o	ne is require			(B11)	s		ators (minimum of two required)
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic	Y drology Indicators: eators (minimum of o	ne is require	s	Salt Crust	` '			ators (minimum of two required) Surface Soil Cracks (B6)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High	Y drology Indicators: cators (minimum of o	ne is require	S	Salt Crust (una (B13)		ators <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High V Satura	Y drology Indicators: cators (minimum of o ce Water (A1) Water Table (A2) ation (A3)	ne is require		Salt Crust (Aquatic Fa	una (B13 Sulfide O) dor (C1)		ators <i>(minimum of two required)</i> Surface Soil Cracks (B6)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satur: Water	Y drology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	ne is require	S	Salt Crust (Aquatic Fa Hydrogen S Ory-Seaso	una (B13 Sulfide O n Water T) dor (С1) Гable (С2)		ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin	Y drology Indicators: cators (minimum of o. ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2)	ne is require	S	Salt Crust (Aquatic Fa Hydrogen S Ory-Seasol	una (B13 Sulfide O n Water T izospheres) dor (C1)		ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift E	Y drology Indicators: eators (minimum of o ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3)	ne is require	S	Salt Crust (Aquatic Fa Hydrogen S Ory-Seaso) Oxidized Rhi where no	una (B13 Sulfide Oon Nater Tizospheres t tilled)) dor (C1) Fable (C2) s on Living Roots (C3)		ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satur: Water Sedin Drift I	Y drology Indicators: cators (minimum of	ne is require		Salt Crust of Aquatic Factorial Advance Salt Crust of Advance Salt of Aquatic	una (B13 Sulfide On n Water T izospheres t tilled)) dor (C1) Fable (C2) on Living Roots (C3) ed Iron (C4)		ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift [Algal Iron D	Y drology Indicators: cators (minimum of o.ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)		— F	Salt Crust of Aquatic Factorial Advance of Advance of Advance of April 2015 of April 2	una (B13 Sulfide Oon Nater Tizospheres t tilled) of Reduce Surface (dor (C1) Fable (C2) on Living Roots (C3) ed Iron (C4)		ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyo Primary Indic Surfar High V Satura Water Sedin Drift D Algal Iron D Inund	Y drology Indicators: cators (minimum of	al Imagery (— F	Salt Crust of Aquatic Factorial Advance Salt Crust of Advance Salt of Aquatic	una (B13 Sulfide Oon Nater Tizospheres t tilled) of Reduce Surface (dor (C1) Fable (C2) on Living Roots (C3) ed Iron (C4)		ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift I Algal Iron I Inund Water	Y drology Indicators: cators (minimum of of of open ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aerication (B5)	al Imagery (— F	Salt Crust of Aquatic Factorial Advance of Advance of Advance of April 2015 of April 2	una (B13 Sulfide Oon Nater Tizospheres t tilled) of Reduce Surface (dor (C1) Fable (C2) on Living Roots (C3) ed Iron (C4)		ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satur: Water Sedin Drift I Algal Iron I Inund Water Field Observ	Y drology Indicators: cators (minimum of	al Imagery (Salt Crust of Aquatic Factorial Advance of Salt Crust of Agrandation of Agrandati	una (B13 Sulfide Oon Nater Tizospheres t tilled) of Reduce Surface (dor (C1) Fable (C2) on Living Roots (C3) ded Iron (C4) (C7) emarks)		ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift E Algal Iron E Inund Water Surface Water	Y drology Indicators: cators (minimum of o.ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aeri r-Stained Leaves (B5) vations: er Present?	al Imagery (S	Salt Crust of Aquatic Factorial Advance of Salt Crust of Aquatic Factorial Advance of Salt of	una (B13 Sulfide Or n Water T izospheres t tilled) of Reduce Surface (Ilain in Re	dor (C1) Fable (C2) Fon Living Roots (C3) Find Iron (C4) Find Iron		ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift I Algal Iron I Inund Water Field Observ Surface Water Water Table	Y drology Indicators: cators (minimum of o.ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aeri r-Stained Leaves (B5) vations: er Present?	al Imagery (9)	B7) YesYes	Salt Crust of Aquatic Factorial Solution Factorial Solution Soluti	una (B13 Sulfide Oon Nater Tizospheres t tilled) of Reduce Surface (dor (C1) Fable (C2) on Living Roots (C3) ded Iron (C4) (C7) emarks)		ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determinat	ion Dat	ta Form	- Grea	at Plains R	egion			
Project/Site: I-25/I-80 Interchange		City/C	county: Che	yenne/L	aramie	S	ampling Date:	7/31/20	19
Applicant/Owner: Wyoming Dept. of Tra	ansportation				State: \	WY S	ampling Point:	S-51	
Investigator(s): R. Newton, D. Soucy					Sec	tion, Towns	ship, Range: S	36 T14N R67V	W
Landform (hillslope, terrace, etc.): plain		Loca	al Relief (co	ncave, c	onvex, none):	none		Slope (%):	0
Subregion (LRR): G - Western Great Pla	ins	Lat.	2319	81.3265	Long	g: 746	097.1749	Datum: W	ΥE
Soil Map Unit Name: <u>Urban land-Poposhia d</u>	complex, 0 to 6 pe	rcent slope	es			NWI Clas	sification:	PEMA/PEN	ИС
Are climatic/hydrologic conditions on the site	ypical for this time	of year?	Yes	X	No	(If no, exp	olain in Remari	ks)	
Are Vegetation , Soil , or Hy	drology sig	nificantly d	isturbed? A	re "Norm	al Circumstan	ces" preser	nt? Yes	ΧN	No
Are Vegetation , Soil , or Hy	drology nat	urally prob	lematic?		(If needed	, explain an	y answers in F	Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing sampling	ng point lo	cations, tr	ansects,	important fe	atures, etc	•		
Hydrophytic Vegetation Present? Yes	No X								
Hydric Soil Present? Yes	No		Is the Sa	mpled Ar	ea within a We	etland?	Yes	No X	X
Wetland Hydrology Present? Yes	No X			•					_
Remarks:	<u> </u>								
Area mapped by NWI as palustrine emergent VEGETATION - Use scientific names of pla		wetland in	dicators.						
VEGETATION COC COLUMN HAMICS OF PIL		minant	Indicator	Domina	nce Test Wo	rksheet:			
Tree Stratum (Plot size: 30x30 ft)		ecies?	Status	Number	of Dominant	Species			
1					e OBL, FACW	, or FAC:		0	(A)
2				(excludi	ng FAC-):				
3				Total N	umber of Dom	inant			
4				Species	Across All St	rata:	_	2	(B)
5									
Sapling/Shrub Stratum (Plot size: 15x ²	0 = Tota	al Cover			of Dominant S e OBL, FACW	•		0%	(A/B)
2.				Prevale	nce Index Wo	orksheet:			
3.					Total % Cov			Multiply by	v:
4.				OBL	species		0 x 1		
5.				FACW	species	_	0 x 2	= 0	_
	0 = Tota	al Cover		FAC	species	-	0 x 3	= 0	
Herb Stratum (Plot size: 5x5 ft)				FACU	species	_	80 x 4	= 320	_
1. Elymus repens	75	Υ	FACU	UPL	species	_	20 x 5	= 100	
2. Bromus inermis	20	Υ	UPL	Column	Totals:	_	100 (A) 420	(B)
3. Dactylis glomerata	5	N	FACU		Pre	evalence In	dex = B/A =	4.2	
4				Hydrop	hytic Vegetat	ion Indicat	ors:		
5					1. Rapid	d Test for H	ydrophytic Veg	jetation	
6						inance Test			
7						alence Inde	-		
8						-	daptations¹ (Pr	•	4.
9					porting	data in Ren	narks or on a s	eparate sneet	[)
0					Problem	natic Hydror	ohytic Vegetati	on (Explain)	
	-	al Cover							
Woody Vine Stratum (Plot size: 30x30	<u>ft</u>)								
1							nd wetland hydro	ology must be	
2		otal O			present, unles	s disturbed o	or problematic.		
% Bare Ground in Herb Stratum		otal Cover			Hydrophytic V	egetation P	resent?	YesX	X_No
Remarks:									

	Matrix			Redox Fea	atures			
(inches)	Color (moist)	% Color	(moist)	%	Type ¹	Loc ²	Texture	Remarks
¹ Type: C=Co	oncentration, D=Depletion	on, RM=Reduc	ed Matrix, C	S=Covere	ed or Coa	ited Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil I	ndicators						Indicate	ors for Problematic Hydric Soils ³ :
Histos	sol (A1)			Sandy	Gleyed M	latrix (S4)	:	1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)				Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	: Histic (A3)			_	d Matrix (-		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)			_		lineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LRR F	:)	_	_	-	лаtrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, G, F	,			ed Matrix		1	Reduced Vertic (F18)
	eted Below Dark Surface			_ '	Dark Surf	` ,		Red Parent Material (TF2)
	Dark Surface (A12)	, (, , ,)	-			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S1)		-		Depression			
	j maony minorai (o i)					ressions (F16)		tors of hydrophylic vegetation and dhydrology must be present, unless
	m Mucky Peat or Peat (9	S2) (L RR G . H)	High Pl			***************************************	a, a. c. og, ast oc p. csct, acss
2.5 cr	m Mucky Peat or Peat (\$ Mucky Peat or Peat (\$3			_			disturb	ed or problematic.
2.5 cm	Mucky Peat or Peat (S3			_	A 72 & 73		disturb	ed or problematic.
2.5 cm 5 cm	•			_			disturb	ed or problematic.
2.5 cm 5 cm Restrictive L	Mucky Peat or Peat (S3			_				
2.5 cm 5 cm	Mucky Peat or Peat (S3			_				ed or problematic. bil Present? Yes No
2.5 cm 5 cm Restrictive L Type: Depth (inc	Mucky Peat or Peat (S3 _ayer: (if observed) hes):	3) (LRR F)		(MLRA	A 72 & 73	of LRR H)		
2.5 cm 5 cm Restrictive L Type: Depth (inc	Mucky Peat or Peat (S3	3) (LRR F)		(MLRA	A 72 & 73	of LRR H)		
2.5 cm 5 cm Restrictive L Type: Depth (inc	Mucky Peat or Peat (S3 _ayer: (if observed) _hes):	3) (LRR F)		(MLRA	A 72 & 73	of LRR H)		
2.5 cm 5 cm Restrictive L Type: Depth (inc Remarks: Soils not inve	Mucky Peat or Peat (S3 _ayer: (if observed) _hes):	3) (LRR F)		(MLRA	A 72 & 73	of LRR H)		
2.5 cm 5 cm Type: Depth (inc Remarks: Soils not inve	Mucky Peat or Peat (S3 Layer: (if observed) thes): estigated - no dominant	hydrophytic ve	getation or v	(MLRA	A 72 & 73	of LRR H)	Hydric So	
2.5 cm 5 cm Type: Depth (inc Remarks: Soils not inve	Mucky Peat or Peat (S3 Layer: (if observed) hes): estigated - no dominant Y drology Indicators:	hydrophytic ve	getation or v	(MLRA	A 72 & 73	of LRR H)	Hydric So	vil Present? Yes No
2.5 cm 5 cm 7 cm Restrictive L Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic Surfa	Mucky Peat or Peat (S3 Layer: (if observed) Thes): Destigated - no dominant of the displayed of the displ	hydrophytic ve	getation or veck all that a	(MLRA	A 72 & 73 /drology ii	of LRR H)	Hydric So	ors (minimum of two required)
2.5 cm 5 cm Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyc Primary Indic Surfa High	Mucky Peat or Peat (S3 Layer: (if observed) thes): estigated - no dominant Y drology Indicators: tators (minimum of one ince Water (A1)	hydrophytic ve	getation or veck all that a	(MLRA wetland hy apply) alt Crust (E	A 72 & 73 /drology ii 311) na (B13)	of LRR H) ndicators.	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
2.5 cm 5 cm Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Mucky Peat or Peat (S3 Layer: (if observed) Thes): Pestigated - no dominant of the second of the	hydrophytic ve	getation or veck all that a	wetland hy apply) alt Crust (E	ydrology in 311) na (B13) ulfide Odd	of LRR H) ndicators. So or (C1)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6)
2.5 cm 5 cm Type: Depth (inc) Remarks: Soils not inve HYDROLOG Wetland Hyo Primary Indic Surfa High Satur Wate	Mucky Peat or Peat (S3 Layer: (if observed) thes): estigated - no dominant Y drology Indicators: tators (minimum of one ince Water (A1) Water Table (A2) tation (A3) r Marks (B1)	hydrophytic ve	getation or veck all that a Sa	wetland hy apply) alt Crust (Equatic Faul	A 72 & 73 /drology in a (B13) ulfide Odd Water Ta	of LRR H) ndicators. So or (C1) able (C2)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
2.5 cm 5 cm Restrictive L Type: Depth (inc) Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin	Mucky Peat or Peat (S3 Layer: (if observed) Thes): Pestigated - no dominant of the size	hydrophytic ve	getation or veck all that a second that a se	wetland hy apply) alt Crust (E quatic Faul rdrogen St y-Season	ydrology in 311) na (B13) ulfide Odd Water Ta	of LRR H) ndicators. So or (C1)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
2.5 cm 5 cm Restrictive L Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I	Mucky Peat or Peat (S3 Layer: (if observed) hes): estigated - no dominant Y drology Indicators: cators (minimum of one ince Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)	hydrophytic ve	getation or vector all that a second all that a	wetland hy apply) alt Crust (Equatic Faundrogen Sury-Season	A 72 & 73 /drology in B11) na (B13) ulfide Odd Water Ta ospheres of tilled)	of LRR H) ndicators. So or (C1) able (C2) on Living Roots (C3)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
2.5 cm 5 cm Type: Depth (inc) Remarks: Soils not inve HYDROLOG Wetland Hyo Primary Indic Surfa High Satur Wate Sedin Drift [Algal	Mucky Peat or Peat (S3 Layer: (if observed) thes): estigated - no dominant Y drology Indicators: tators (minimum of one ince Water (A1) Water Table (A2) tation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	hydrophytic ve	getation or veck all that a Sa Accumum Dr Ox (w	wetland hy apply) alt Crust (Equatic Faul drogen Su y-Season idized Rhize	A 72 & 73 /drology in B11) na (B13) ulfide Odd Water Ta ospheres of tilled) Reduced	of LRR H) ndicators. So or (C1) able (C2) on Living Roots (C3)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
2.5 cm 5 cm Restrictive L Type: Depth (inc) Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic Surfa High ' Satur Wate Sedin Drift [Algal Iron D	Mucky Peat or Peat (S3 Layer: (if observed) thes): estigated - no dominant of the section of t	hydrophytic ve	getation or veck all that a second of the control o	wetland hy apply) alt Crust (E quatic Faul drogen Si y-Season idized Rhize there not the	A 72 & 73 A 73 A 72 & 73 A 72 & 73 A 72 & 73 A 73 A 74 A 72 & 73 A 74 A 74 A 74 A 74 A 75	of LRR H) ndicators. So or (C1) able (C2) on Living Roots (C3) I Iron (C4) C7)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2)
2.5 cm 5 cm Festrictive L Type: Depth (inc Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund	Mucky Peat or Peat (S3 Layer: (if observed) hes): estigated - no dominant of the sators (minimum of one ince Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aerial Ince	hydrophytic ve	getation or veck all that a second of the control o	wetland hy apply) alt Crust (Equatic Faul drogen Su y-Season idized Rhize	A 72 & 73 A 73 A 72 & 73 A 72 & 73 A 72 & 73 A 73 A 74 A 72 & 73 A 74 A 74 A 74 A 74 A 75	of LRR H) ndicators. So or (C1) able (C2) on Living Roots (C3) I Iron (C4) C7)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C5) Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm 7 cm Restrictive L Type: Depth (inc) Remarks: Soils not inversely HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate	Mucky Peat or Peat (S3 Layer: (if observed) hes): estigated - no dominant leading of the state	hydrophytic ve	getation or veck all that a second of the control o	wetland hy apply) alt Crust (E quatic Faul drogen Si y-Season idized Rhize there not the	A 72 & 73 A 73 A 72 & 73 A 72 & 73 A 72 & 73 A 73 A 74 A 72 & 73 A 74 A 74 A 74 A 74 A 75	of LRR H) ndicators. So or (C1) able (C2) on Living Roots (C3) I Iron (C4) C7)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2)
2.5 cm 5 cm Festrictive L Type: Depth (inc) Remarks: Soils not inversely HYDROLOG Wetland Hyo Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate Field Observ	Mucky Peat or Peat (S3 Layer: (if observed) thes): estigated - no dominant of the set	hydrophytic ve	getation or veck all that a Sa Accumum Dr Ox (w	wetland hy apply) alt Crust (E quatic Faul drogen Si y-Season idized Rhize chere not the esence of the sence of the control of	A 72 & 73 A 73 A 74 A 72 & 73 A 72 & 73 A 73 A 74 A 72 & 73 A 73 A 74 A 74 A 75 A 75	of LRR H) ndicators. So or (C1) able (C2) on Living Roots (C3) I Iron (C4) C7) narks)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
2.5 cm 5 cm 7 cm Restrictive L Type: Depth (inc) Remarks: Soils not inversely HYDROLOG Wetland Hyd Primary Indic Surfa High ' Satur Wate Sedin Drift [Algal Iron D Inund Wate Field Observ Surface Wate	Mucky Peat or Peat (S3 Layer: (if observed) Thes): Pestigated - no dominant of the section of	hydrophytic ve	getation or veck all that a seck all that a se	wetland hy apply) alt Crust (E quatic Faul drogen Si y-Season idized Rhize there not the sence of the sence o	drology in (Arology in (Arolog	of LRR H) ndicators. So or (C1) able (C2) on Living Roots (C3) I Iron (C4) c7) narks) Depth (inches)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
2.5 cm 5 cm 7 cm Restrictive L Type: Depth (inc) Remarks: Soils not inversely HYDROLOG Wetland Hyd Primary Indic Surfa High ' Satur Wate Sedin Drift I Algal Iron I Inund Wate Field Observ Surface Wate Water Table	Mucky Peat or Peat (S3 Layer: (if observed) Thes): Pestigated - no dominant of the section of	hydrophytic ve	getation or veck all that a Sa Accumum Dr Ox (w	wetland hy apply) alt Crust (E quatic Fau drogen Si y-Season idized Rhize chere not the esence of hin Muck S her (Expla	A 72 & 73 /drology in Balance Balance Water Ta cospheres of tilled) Reduced Surface (Cosin in Rem X I X I	of LRR H) ndicators. So or (C1) able (C2) on Living Roots (C3) I Iron (C4) C7) narks)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determin	ation Da	ata Forn	า - Gre	at Plains Reç	gion		
Project/Site: I-25/I-80 Interchange		City	/County: Che	eyenne/L	aramie	Sampling D	ate: 7/3	1/2019
Applicant/Owner: Wyoming Dept. of Tra	ansportation				State: WY	Sampling Po	oint:	S-52
Investigator(s): R. Newton, D. Soucy					Sectio	n, Township, Range	e: S36 T14N	R67W
Landform (hillslope, terrace, etc.): depres	sion	Lo	cal Relief (co	oncave, c	onvex, none):	concave	Slope ((%): <u>0-1</u>
Subregion (LRR): G - Western Great Pla	ins	Lat.	. 2315	23.4732	Long:	745779.0086	Datum	n: WY E
Soil Map Unit Name: <u>Urban land-Poposhia d</u>	complex, 0 to 6	percent slo	pes		1	NWI Classification:	U	IPL
Are climatic/hydrologic conditions on the site t	typical for this	time of year?	? Yes	. X	No ((If no, explain in Rei	marks)	
Are Vegetation, Soil, or Hy	drology	significantly	disturbed? A	re "Norm	al Circumstance	s" present? Yes	X	No
Are Vegetation , Soil , or Hy	drology	naturally pro	blematic?		(If needed, e.	xplain any answers	in Remarks.))
SUMMARY OF FINDINGS - Attach site map	showing san	- npling point	locations, ti	ransects,	important featu	ıres, etc.		
	X No							
Hydric Soil Present? Yes	X No	•	Is the Sa	mpled Ar	ea within a Wetla	and?	Yes X N	lo
·	X No	•		•				
		•						
Remarks:								
Depressional palustrine emergent wetland PE	M-17 at culve	rt mouth.						
VEGETATION - Use scientific names of pla	nts.							
Tree Stratum (Plot size: 30x30 ft)	Absolute % Cover	Dominant	Indicator Status		ance Test Works of Dominant Sp			
Tree Stratum (Plot size: 30x30 ft)	70 COVE	Species?	Status		e OBL, FACW, o		2	(4)
2					ing FAC-):	1710.		(A)
3.				Tatal Ni	h an af Dansina	4		
4.					umber of Domina Across All Strat		2	(B)
5.					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
Sapling/Shrub Stratum (Plot size: 15x ⁻¹	0 =	Total Cover			of Dominant Spee OBL, FACW, o		100%	(A/B)
2.				Prevale	ence Index Work	sheet:		
3					Total % Cover	of:	Multip	ly by:
4				OBL	species		x 1 =	12
5				FACW	species	35	x 2 =	70
	=	Total Cover		FAC	species	5	x 3 =	15
Herb Stratum (Plot size: 5x5 ft)				FACU	•		x 4 =	0
1. Hordeum jubatum	35	<u>Y</u>	FACW	UPL	species		<u>x</u> 5 =	0
2. Portulaca oleracea	5	<u>N</u>	FAC	Column		52	_`	97 (B)
3. Puccinellia nuttalliana	12	<u> </u>	OBL			alence Index = B/A	= 1.9	
4				нуагор	hytic Vegetation		Vagatation	
5						est for Hydrophytic nce Test is >50%.	vegetation	
6.						nce Index is $\leq 3.0^{\circ}$.		
8.						logical Adaptations¹	(Provide sur	0-
9.					•	ta in Remarks or on		
0.					Problemat	ic Hydrophytic Vege	etation (Expla	ain)
<u> </u>	52 =	Total Cover				,		,
Woody Vine Stratum (Plot size: 30x30	ft)							
1.					¹ Indicators of hyd	dric soil and wetland h	nydrology mus	t he
2.					•	isturbed or problema		
	0	= Total Cove	er			·		
% Bare Ground in Herb Stratum 4	8 %				Hydrophytic Veg	etation Present?	X Yes	s No
Remarks:				1				

SOIL

S-52

Sampling Point:

(inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0-1 10 YR 2/1 100 muck	Depth Matrix		Redox Fe	eatures		,	
1-5	(in all a a)	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
S-12	0-1 10 YR 2/1 100					muck	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Closdion: PL=Pore Lining, M=Matrix	1-5 10 YR 4/1 100					clay	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators Histosca (A1) Sandy Gleyed Matrix (S4) Histosca (A1) Sandy Redox (S5) Sandy Redox (S5) Dark Surface (S7) (LRR F, G, H) High Palans Depressions (F36) X 1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F2) Loamy Mucky Mineral (F1) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Redox Depressions (F86) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Redox Depressions (F86) Thick Dark Surface (A12) Sor Mucky Peat or Peat (S2) (LRR G, H) High Palans Depressions (F16) Type: Depth (inches): HYDROLOGY H	5-12 10 YR 4/1 50					clay	some road fill
Hydric Soil Indicators Histosol (A1)	10 YR 3/2 50					clay	some road fill
Hydric Soil Indicators Histosol (A1)							
Hydric Soil Indicators Histosol (A1)							
Hydric Soil Indicators Histosol (A1)							
Histosol (A1) Histosol (A2) Histo Epipedon (A2) Sandy Redox (S5) Coast Prairie Redox (A16) (LRR F, G, H) Black Histor (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Loamy Mucky Mineral (F1) High Plains Depressions (F16) Red variety (F17) Thick Dark Surface (A12) Depleted Below Dark Surface (A12) Depleted Below Dark Surface (A12) Depleted Matrix (F2) Redox Dark Surface (F7) Thick Dark Surface (A12) Depleted Dark Surface (F7) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Some Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F8) High Plains Depressions (F16) Restrictive Layer: (If observed) Type: Depth (inches): Hydric Soil Present? Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) X Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6) Saturation (A3) Hydrogen Sulfide Odor (C1) Deplosits (B3) Where not tilled) Dy-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Water Stained Leaves (B3) Water-Stained Leaves (B3) Water-Stained Leaves (B3) Water Table Present? Yes X No Depth (inches) A Wetland Hydrology (B7) Water Table Present? Yes X No Depth (inches) Water Table Present?	¹ Type: C=Concentration, D=Depletion, RM=Re	duced Matrix,	CS=Cove	red or Co	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Histic Epipedon (A2) Sandy Redox (S5) Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR 6) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressions (F16) (LRR 6, H) Depleted Matrix (F2) (LRR 6) Reduced Vertic (F18) Reduced Vertic (F18) Redox Dark Surface (F6) Red Parent Material (T72) Thick Dark Surface (A11) Depleted Dark Surface (F6) Red Parent Material (T72) Thick Dark Surface (A12) Depleted Dark Surface (F6) Red Parent Material (T72) Other (Explain in Remarks) Sandy Mucky Mineral (S1) Redox Depressions (F8) Princk Dark Surface (A12) Sandy Mucky Peat or Peat (S2) (LRR G, H) Sometime of Peat (S2) (LRR G, H) Depleted Dark Surface (F7) MINICATOR (F8) Restrictive Layer: (If observed) Type: Depth (Inches): Hydric Soil Present? Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (B6) Saturation (A3) Hydrogen Sulfide Odor (C1) Dariange Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Ton Deposits (B3) Water Marks (B1) Drift Deposits (B3) X Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Saturation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Tripe: Surface Water Stale Leaves (B9) Weter Stale Average (C7) Weter Stale Average (C7) Weter Stale Average (C7) Weter Stale Leaves (B9) Weter Table Present? Yes X No Depth (Inches) Bart (Inches) A Wetland Hydrology (Inches) Present? Wetland Hydrology (Inches) Present?	Hydric Soil Indicators					Indicato	ors for Problematic Hydric Soils ³ :
Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) (LRR G) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) High Plains Depressions (F16) (LRR F, G, H) Depleted Matrix (F2) (LRR Houtside of MLRA 72 & 73) X 1 cm Muck (A9) (LRR F, G, H) Depleted Matrix (F3) Reduced Vertic (F18) Red Parent Material (TF2) Thick Dark Surface (A11) Redox Dark Surface (F6) Red Parent Material (TF2) Other (Explain in Remarks) Sandy Mucky Mineral (S1) Redox Depressions (F8) Plink Depressions (F8) P	Histosol (A1)		Sandy	Gleyed	Matrix (S4)	1	cm Muck (A9) (LRR I, J)
Hydrogen Sulfide (A4) Statified Layers (A5) (LRR F) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Each Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) Som Mucky Peat or Peat (S2) (LRR G, H) Depleted Dark Surface (F7) Thick Dark Surface (A12) Depleted Dark Surface (F7) Mucky Peat or Peat (S2) (LRR G, H) Som Mucky Peat or Peat (S3) (LRR F) Depleted Dark Surface (F8) Type: Depleted Dark Surface (F16) Thick Dark Surface (A12) Thick Dark Surface (A12) Depleted Dark Surface (F7) Mucky Peat or Peat (S2) (LRR G, H) Type: Depleted Dark Surface (F16) Thick Dark Surface (A12) Thick Dark Type: Depth (Inches): Hydric Soil Present? Yes X No Depth (Inches) Thick Dark Surface (A12) Thick Dark Type: Thick Dark Surface (A12) Thick Dark Type: Thick Dark Ty	Histic Epipedon (A2)		Sandy	Redox (S5)		Coast Prairie Redox (A16) (LRR F, G, H)
Stratified Layers (A5) (LRR F) Loamy Gleyed Matrix (F2) Loamy Gleyed Matrix (F2) Depleted Balow Dark Surface (A11) Depleted Balow Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Peat or Peat (S2) (LRR G, H) Depleted Dark Surface (F7) Fire Mucky Peat or Peat (S3) (LRR F) Mucky Peat or Peat (S2) (LRR G, H) High Plains Depressions (F16) Mucky Peat or Peat (S2) (LRR G, H) Mucky Peas or Peat	Black Histic (A3)		Stripp	ed Matrix	(S6)		Dark Surface (S7) (LRR G)
Depleted Matrix (F3)	Hydrogen Sulfide (A4)		Loam	y Mucky I	Mineral (F1)		ligh Plains Depressions (F16)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Depleted Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Mucky Mineral (S1) Agedox Depressions (F8) High Plains Depressions (F16) Sort Mucky Peat or Peat (S2) (LRR G, H) Sort Mucky Peat or Peat (S3) (LRR F) Water Table (A2) Surface (A12) Redox Depressions (F8) High Plains Depressions (F16) Water Alable (A12) Restrictive Layer: (if observed) Type: Depth (inches): Hydric Soil Present? Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) X Surface Water (A1) Salt Crust (B11) Surface Soil Cracks (86) High Water Table (A2) Aquatic Fauna (B13) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Water Narks (B1) Dirift Deposits (B3) (where not tilled) Vater Narks (B4) Present? Yes X No Depth (inches) Surface Water Present? Yes X No Depth (inches) 4 Wetland Hydrology Present? Field Observations: Surface Water Present? Yes X No Depth (inches) 4 Wetland Hydrology Present? Yes X No Depth (inches) 4 Wetland Hydrology Present? Yes X No Depth (inches) 4 Wetland Hydrology Present? Yes X No Depth (inches) 4 Wetland Hydrology Present?	Stratified Layers (A5) (LRR F)		Loam	y Gleyed	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S2) (LRR G, H) Som Mucky Peat or Peat (S2) (LRR G, H) Som Mucky Peat or Peat (S3) (LRR F) Type: Depth (inches): Hydric Soil Present? Wetland Hydrology Indicators Frimary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) X Surface Water (A1) Saturation (A3) Hydrogen Sulfide Odor (C1) High Water Table (B2) Dy-Season Water Table (C2) Drift Deposits (B3) X Algal Mat or Crust (B4) Present? Yes X No Depth (inches) Depth (inches) Depth (inches) Other (Explain in Remarks) Indicators of hydrophylic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes X No Remarks: Hydric Soil Present? Yes X No Secondary Indicators (minimum of two required) Secondary Indicators (minimu	X 1 cm Muck (A9) (LRR F, G, H)		Deple	ted Matri	(F3)	F	Reduced Vertic (F18)
Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F) (MLRA 72 & 73 of LRR H) Restrictive Layer: (if observed) Type: Depth (inches): Hydric Soil Present? Wetland Hydrology Indicators: Hydrogen Sulfide Odor (C1) Saturation (A3) Hydrogen Sulfide Odor (C1) Saturation (A3) Water Marks (B1) Dirft Deposits (B3) Dirft Deposits (B3) Mark (B4) Algal Mator Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Algal Mator Crust (B4) Presence of Reduced Iron (C4) Iron Deposits (B5) Algal Mator Crust (B4) Presence (B7) Water Stained Leaves (B9) Tyes X No Depth (inches) Algal Crust (B1) Water Pasence (B9) Presence (Pasence) Tyes X No Depth (inches) Algal Mator Crust (B4) Presence (Pasence) Tyes X No Depth (inches) A Water Present? Yes X No Depth (inches) A Wetland Hydrology Present? Present? Presenter (B7) Wetland Hydrology Indicators (minimum of two required) Wetland Hydrology Indicators (minimum of two required) Becondary Indicators (minimum of two required) Secondary Indicators (minimum of tw	Depleted Below Dark Surface (A11)		Redox	x Dark Su	rface (F6)	F	Red Parent Material (TF2)
2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F) (MIRA 72 & 73 of IRR H) Restrictive Layer: (if observed) Type: Depth (inches): Hydric Soil Present? Yes X No Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) X Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Sediment Deposits (B1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Drift Deposits (B3) (where not tilled) Tron Deposits (B5) Ton Deposits (B5) Vater-Stained Leaves (B9) Water Albert Present? Yes X No Depth (inches) 4 Wetland Hydrology must be present, unless disturbed or problematic. wetland hydrology must be present, unless disturbed of IRR H) wetland hydrology must be present, unless disturbed or problematic. Water Nate Nate (S0) (LRR F) Water Marks (B1) Secondary Indicators (minimum of two required) Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Secondary Indicators (minimum of two required) Secondary Indicators (minimum of two required) Surface Water Nate (A1) Surface Soil Cracks (B6) Surface Water Present? Wetland Hydrology (must be present, unless disturbed or problematic. Water Table Present? Yes X No Depth (inches) 4 Wetland Hydrology Present?	Thick Dark Surface (A12)		Deple	ted Dark	Surface (F7)		Other (Explain in Remarks)
### Plains Depressions (F16) wetland hydrology must be present, unless of scm Mucky Peat or Peat (S3) (LRR F) ### Plains Depressions (F16) wetland hydrology must be present, unless of sturbed or problematic. ### Restrictive Layer: (if observed) Type: Depth (inches): ### Plains Depressions (F16) wetland hydrology must be present, unless of sturbed or problematic. ### Problematics or the present? ### Problematics or the present of the prese	Sandy Mucky Mineral (S1)		Redox	x Depress	ions (F8)	3Indicat	ors of hydrophylic vegetation and
Restrictive Layer: (if observed) Type: Depth (inches): Hydric Soil Present? Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) X Surface Water (A1) Salt Crust (B11) Squrface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Squrface Soil Cracks (B6) Squrface Soil Cracks (B6) Squrface Soil Cracks (B6) Opy-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Crayfish Burrows (C8) X Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Squrface Water Squrface (B9) Frost-Heave Hummocks (D7) (LRR Field Observations: Surface Water Present? Yes X No Depth (inches) A Wetland Hydrology Present?	2.5 cm Mucky Peat or Peat (S2) (LRR (High F	Plains De	pressions (F16)		, , , ,
Type: Depth (inches): Hydric Soil Present? Yes X No Remarks: Hydric Soil Present? Yes X No Remarks: Hydric Soil Present? Yes X No Remarks: Hydrology Indicators: Hydrology Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required)	5 cm Mucky Peat or Peat (S3) (LRR F)	_	(ML	RA 72 & 7	B of LRR H)	disturbe	ed or problematic.
Type:	Restrictive Layer: (if observed)						
Depth (inches): Hydric Soil Present? Yes X No							
Remarks: HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) High Water Table (A2) Satt Crust (B11) Satt Crust (B13) Saturation (A3) Hydrogen Sulfide Odor (C1) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Presence of Reduced Iron (C4) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Water Surface Water (Present? Yes X No Depth (inches) Secondary Indicators (minimum of two required) Sparisley Vegetated Concave Surf. (B8) Sparisley Vegetated Concave Surf. (B8)	· · ·					Hvdric So	il Present? Yes X No
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Fresence of Reduced Iron (C4) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Yes X No Depth (inches) Secondary Indicators (minimum of two required) Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Sparsley Vegetated Concave Surf.						,	
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Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) X Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Table (C2) Driy-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery X Geomorphic Position (D2) Frost-Heave Hummocks (D7) (LRR Wetland Hydrology Water Table Present? Yes X No Depth (inches) 14 Wetland Hydrology Present?				` '	•		_ ` ′
Water Marks (B1) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Orift Deposits (B3) Where not tilled) Versence of Reduced Iron (C4) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Field Observations: Surface Water Present? Versence Organism Surface (C2) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Saturation Visible on Aerial Imagery Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Saturation Visible on Aerial Imagery Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Saturation Visible on Aerial Imagery Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Crayfish Burrows (C8) Saturation Visible on Aerial Imagery Crayfish Burrows (C8) Saturation Visib			•	` '			- ' ' ' '
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Iron Deposits (B5) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR Field Observations: Surface Water Present? Water Table Present? Yes X No Depth (inches) Yes X No Depth (inches) 14 Present?		•		•	d Iron (C4)		_ ` ` '
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR Field Observations: Surface Water Present? Yes X No Depth (inches) Water Table Present? Yes X No Depth (inches)					` '		
Water-Stained Leaves (B9) Frost-Heave Hummocks (D7) (LRR Field Observations: Surface Water Present? Yes X No Depth (inches) 4 Wetland Hydrology Water Table Present? Yes X No Depth (inches) 14 Present?				•	•		-
Field Observations: Surface Water Present? Yes X No Depth (inches) 4 Wetland Hydrology Water Table Present? Yes X No Depth (inches) 14 Present?			illei (Expi	iaiii iii ixe	marks)		_ ` '
Surface Water Present? Yes X No Depth (inches) 4 Wetland Hydrology Water Table Present? Yes X No Depth (inches) 14 Present?	water-stailled Leaves (D9)						- Flost-neave nullillocks (D7) (LKK F)
Water Table Present? Yes X No Depth (inches) 14 Present?							
water rable resent:		Yes			,		_
Saturation Present? (includes capillary fringe) Yes X No Depth (inches) surface X Yes No		_			,		_
. — — — — — — — — — — — — — — — — — — —	Saturation Present? (includes capillary fringe)	Yes _	X N	o <u> </u>	Depth (inches)	surface	X Yes No

Wetland	Determination	on Data	Form - Grea	at Plains Reg	ion	
Project/Site: I-25/I-80 Interchange		City/Coun	nty: Cheyenne/L a	aramie	Sampling Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Ti	ansportation			State: WY	Sampling Point:	S-53
Investigator(s): R. Newton, D. Soucy				Section	n, Township, Range: S3	6 T14N R67W
Landform (hillslope, terrace, etc.): minor	terrace	Local Re	elief <i>(concave, co</i>	onvex, none):	none	Slope (%): 0
Subregion (LRR): G - Western Great Pla	ains	Lat.	231529.4303	Long:	745782.4563	Datum: WY E
Soil Map Unit Name: <u>Urban land-Poposhia</u>	complex, 0 to 6 perc	ent slopes			IWI Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for this time of	of year?	Yes X	No(lf no, explain in Remarks	s)
Are Vegetation, Soil, or Hy	ydrologysigni	ficantly distu	rbed? Are "Norma	al Circumstances	s" present? Yes	X No
Are Vegetation , Soil , or Hy	ydrology natui	rally problem	atic?	(If needed, ex	kplain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map	showing sampling	g point locat	ions, transects,	important featu	res, etc.	
Hydrophytic Vegetation Present? Yes	No X					
Hydric Soil Present? Yes	No X	Is	the Sampled Are	ea within a Wetla	nd? Yes	No X
Wetland Hydrology Present? Yes	No X				_	
Remarks:						
Paired upland point for PEM-17.						
VEGETATION - Use scientific names of pla	ants.					
Tree Stratum (Diet size) 20v20 ft				nce Test Works		
Tree Stratum (Plot size: 30x30 ft)	% Cover Spec	cies? Sta		of Dominant Spe OBL, FACW, o		0 (0)
1				ng FAC-):		0 (A)
3.						
4.				ımber of Domina Across All Strata		1 (B)
5.			— Opecies	ACIOSS All Otlate	<u> </u>	(Б)
·	0 = Total	Cover				
Sapling/Shrub Stratum (Plot size: 15x	15 ft)	00101		of Dominant Spe OBL, FACW, or		0% (A/B)
1	1311)		That Air	S OBE, I ACVV, O		(А/В)
2			Provalo	nce Index Work	shoot:	
3.			<u> </u>	Total % Cover		Multiply by:
4			OBL	species	0 x 1 =	
5				species	0 x 2 =	
·	0 = Total	Cover	FAC	species	0 x 3 =	
Herb Stratum (Plot size: 5x5 ft)		00.0.		species	0 x 4 =	
1. Bromus inermis	10 1	N U	PL UPL	species	85 x 5 =	
2. Festuca ovina			VI Column	•	85 (A)	425 (B)
3.		<u> </u>			alence Index = B/A =	5.0
4.			Hydrop	hytic Vegetation	ı Indicators:	
5.				-	est for Hydrophytic Vege	etation
6.					nce Test is >50%.	
7.				3. Prevalei	nce Index is <3.01	
8.				4. Morphol	ogical Adaptations¹ (Pro	vide sup-
9.				porting dat	a in Remarks or on a se	parate sheet)
0.				Problemati	c Hydrophytic Vegetatio	n (Explain)
	85 = Total	Cover				
Woody Vine Stratum (Plot size: 30x30	ft)					
1				¹ Indicators of hyd	ric soil and wetland hydrol	ogy must be
2.					sturbed or problematic.	
	0 = To	tal Cover				
% Bare Ground in Herb Stratum	15 %			Hydrophytic Vego	etation Present?	Yes X No
					_	
Remarks:						
Species with no indicator (NI) are treated as	UPL for this analysis	i.				

Profile Desci								
Depth	Matrix		F	Redox Fea	tures			
(inches)	Color (moist)	% C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	10 YR 4/2	100					Clay Loam	
¹ Type: C=Co	ncentration, D=Deple	etion, RM=Re	duced Matrix, C	S=Covered	d or Coat	ed Sand Grains.	² Location: PL:	=Pore Lining, M=Matrix
Hydric Soil I	ndicators						Indicat	ors for Problematic Hydric Soils ³ :
Histos	sol (A1)			Sandy G	Sleyed Ma	atrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)			_	Redox (S5			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)			_ ′	l Matrix (S	,		Dark Surface (S7) (LRR G)
	gen Sulfide (A4)			_ ``	,	neral (F1)		High Plains Depressions (F16)
	ied Layers (A5) (LRF	RF)	<u></u>		Gleyed M			(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, G	•			d Matrix (Reduced Vertic (F18)
	ted Below Dark Surfa		-		Dark Surfa	,		Red Parent Material (TF2)
	Dark Surface (A12)	(,		_		ırface (F7)		Other (Explain in Remarks)
	/ Mucky Mineral (S1))		_	Depressio	` '		, ,
	n Mucky Peat or Pea		—— Э. H)	_		essions (F16)		tors of hydrophylic vegetation and d hydrology must be present, unless
_			, ,		= -	()		·
5 cm l	-	(S3) (LRR F)	<u> </u>	(MLRA	72 & 73 c	of LRR H)	aisturb	ed or problematic.
	Mucky Peat or Peat ((S3) (LRR F)		(MLRA	72 & 73 o	of LRR H)	disturb	ed or problematic.
Restrictive L	-	(S3) (LRR F)		(MLRA	. 72 & 73 o	of LRR H)	disturb	ed or problematic.
Restrictive L	Mucky Peat or Peat (ayer: (if observed)	(S3) (LRR F)		(MLRA	. 72 & 73 o	of LRR H)		
Restrictive L	Mucky Peat or Peat (ayer: (if observed)	(S3) (LRR F)		(MLRA	. 72 & 73 o	of LRR H)		oil Present? Yes No _X
Restrictive L	Mucky Peat or Peat (ayer: (if observed)	(S3) (LRR F)		(MLRA	. 72 & 73 o	of LRR H)		
Restrictive L Type: Depth (incl	Mucky Peat or Peat (ayer: (if observed)	(S3) (LRR F)		(MLRA	. 72 & 73 o	of LRR H)		
Restrictive L Type: Depth (incl	Mucky Peat or Peat (.ayer: (if observed) thes):	(S3) (LRR F)		(MLRA	. 72 & 73 c	of LRR H)		
Restrictive L Type: Depth (incl Remarks:	Mucky Peat or Peat (.ayer: (if observed) thes):	(S3) (LRR F)		(MLRA	. 72 & 73 o	of LRR H)		
Restrictive L Type: Depth (incl Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat (ayer: (if observed) hes):		check all that a		. 72 & 73 o		Hydric So	
Restrictive L Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indica	Mucky Peat or Peat (.ayer: (if observed) hes): Y Irology Indicators:						Hydric So	oil Present? Yes No X
Restrictive L Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indica Surface	Mucky Peat or Peat (.ayer: (if observed) thes): Y Irology Indicators: ators (minimum of or		Sa	pply)	11)		Hydric So	oil Present? Yes No X
Restrictive L Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indica Surface High \	Mucky Peat or Peat (ayer: (if observed) thes): Y Irology Indicators: ators (minimum of or one Water (A1) Water Table (A2)		Sa Aq	<i>pply)</i> It Crust (B ² uatic Faun	11) a (B13)	s	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6)
Restrictive L Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indica Surfac High \ Satura	Mucky Peat or Peat (ayer: (if observed) hes): Y Irology Indicators: ators (minimum of or ce Water (A1)		Sa Aq Hy	<i>pply)</i> It Crust (B	11) a (B13) lfide Odol	s (C1)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Restrictive L Type: Depth (incl Remarks: HYDROLOG Wetland Hyd Primary Indica Surfac High \ Satura Water	Mucky Peat or Peat (.ayer: (if observed) thes): Y Irology Indicators: ators (minimum of or or one Water (A1) Nater Table (A2) ation (A3)		Sa Aq Hy	<i>pply)</i> It Crust (B ² uatic Faun drogen Sul	11) a (B13) Ifide Odol Water Tab	S r (C1) ble (C2)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive L Type: Depth (incl Remarks: HYDROLOG' Wetland Hyd Primary Indica Surface High V Satura Water Sedim	Mucky Peat or Peat (ayer: (if observed) hes): Y Irology Indicators: ators (minimum of or ce Water (A1) Nater Table (A2) ation (A3) r Marks (B1)		Sa Aq Hy Dry Oxi	<i>pply)</i> It Crust (B uatic Faun drogen Su /-Season V dized Rhizo	11) a (B13) Ifide Odol Water Tak spheres or	s (C1)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive L Type: Depth (incl Remarks: HYDROLOGY Wetland Hyd Primary Indic: Surfact High V Satura Water Sedim Drift D	Mucky Peat or Peat (.ayer: (if observed) hes): Y Irology Indicators: ators (minimum of or		Sa Aq Hy Dry Oxi	pply) It Crust (Brustic Faundrogen Surangen Verseason Ve	11) a (B13) Ifide Odol Water Tak spheres or	Sor (C1) Dole (C2) Living Roots (C3)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive L Type: Depth (incl Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D Algal	Mucky Peat or Peat (ayer: (if observed) hes): Y Irology Indicators: ators (minimum of or		Sa Aq Dry Oxi (wl	pply) It Crust (Baundrogen Sulared Rhizon dized Rhizon here not ti	11) a (B13) Ifide Odor Water Tak spheres or illed) Reduced	r (C1) ple (C2) n Living Roots (C3)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Restrictive L Type: Depth (incl Remarks: HYDROLOG' Wetland Hyd Primary Indic: Surfac High V Satura Water Sedim Drift D Algal I	Mucky Peat or Peat (ayer: (if observed) thes): Y Irology Indicators: ators (minimum of or	ne is required	Sa Aq Hy Dry Oxi (w) Pre	pply) It Crust (Bruatic Faundrogen Suldized Rhizonhere not tiesence of Fun Muck Su	11) a (B13) Ifide Odol Water Tak spheres or illed) Reduced urface (C7	Sor (C1) Dole (C2) In Living Roots (C3) Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Restrictive L Type: Depth (incl Remarks: HYDROLOG' Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D Algal I Iron D Inunda	Mucky Peat or Peat (ayer: (if observed) hes): Y Irology Indicators: ators (minimum of or	ne is required	Sa Aq Hy Dry Oxi (w) Pre	pply) It Crust (Baundrogen Sulared Rhizon dized Rhizon here not ti	11) a (B13) Ifide Odol Water Tak spheres or illed) Reduced urface (C7	Sor (C1) Dole (C2) In Living Roots (C3) Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Restrictive L Type: Depth (incl Remarks: HYDROLOGY Wetland Hyd Primary Indic: Surface High V Satura Water Sedim Drift D Iron D Inunda Water	Mucky Peat or Peat (.ayer: (if observed) hes): Y Irology Indicators: ators (minimum of or	ne is required	Sa Aq Hy Dry Oxi (w) Pre	pply) It Crust (Bruatic Faundrogen Suldized Rhizonhere not tiesence of Fun Muck Su	11) a (B13) Ifide Odol Water Tak spheres or illed) Reduced urface (C7	Sor (C1) Dole (C2) In Living Roots (C3) Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: Depth (incl Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D Iron D Inunda Water Field Observ	Mucky Peat or Peat (ayer: (if observed) hes): Y Irology Indicators: ators (minimum of or	ne is required	Sa Aq Hy Dry Oxi (w) Thi Oth	pply) It Crust (Bruatic Faundrogen Sulvested Rhizon Nere not tiesence of Fan Muck Suner (Explai	11) a (B13) Ifide Odol Water Tak spheres or illed) Reduced urface (C7	Sof (C1) Dole (C2) I Living Roots (C3) Iron (C4) T) arks)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive L Type: Depth (incl Remarks: HYDROLOG' Wetland Hyd Primary Indica Surface High N Satura Water Sedim Drift D Iron D Inunda Water Field Observ Surface Water	Mucky Peat or Peat (ayer: (if observed) hes): Y Irology Indicators: ators (minimum of or be Water (A1) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria r-Stained Leaves (B9 rations: er Present?	ne is required	Sa Aq Hy Dry Oxi (wl Pre Thi	pply) It Crust (Brustic Faundrogen Sudized Rhizonhere not tiesence of Fan Muck Sumer (Explain No	11) a (B13) Ifide Odor Water Takes spheres or illed) Reduced urface (C7 n in Remain	Sor (C1) Dole (C2) In Living Roots (C3) Iron (C4) Iron (C4) Iron (C4) Iron (C4) Iron (C4) Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive L Type: Depth (incl Remarks: HYDROLOGY Wetland Hyd Primary Indic: Surface High V Satura Water Sedim Drift D Inund: Water Field Observ Surface Water Water Table I	Mucky Peat or Peat (ayer: (if observed) hes): Y Irology Indicators: ators (minimum of or be Water (A1) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria r-Stained Leaves (B9 rations: er Present?	ne is required	Sa Aq Hy Dry Oxi (w) Thi Oth	pply) It Crust (Bruatic Faundrogen Sulvested Rhizon Nere not tiesence of Fan Muck Suner (Explai	11) a (B13) Ifide Odol Water Tab spheres or illed) Reduced urface (C7 n in Remain	Sof (C1) Dole (C2) I Living Roots (C3) Iron (C4) T) arks)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Ordinary High Water Mark Data Form

Stream Name Crow Cre	ek	Stream No: S-54 PS	G-1	5.04	
Assoc Wetland No:	IA	Date 13119	C	ounty/State Lar	amre/wy
Investigator L. Muh	K, D. Soven T	eam No	Landowner/		
STREAM PLANS -SURFACE	VIEW AND CROSS SECTION	ng length), surrounding area	a, and direction arrow	NI	
	20 ft tyrof bunk	T-25 Sbound	7-25 N poor		1 marced as a dus side white side almost 90° bank
Stream Flow	Fast	Moderate Intermittent	Slow	Very Slow	None
Stream Depth (in.)	0-3 3-6	6-12 12-18	18-24 24-36	36-48	48-60 60+
Stream Width (ft.)	Top of Banks ~2		Water Surface: ~18		
Stream Substrate %	Bedrock	Gravel00	Sand	Silt/Clay_10	Organic
Bank Height (ft.)	Left 0-2 Right 0-2	2-4 🔀	4-6 4-6	6-8 6-8	8+ 8+
Bank Slope (°)	Left 0-20 Right 0-20	20-40	40-60 40-60	60-80	80+
Water Clarity	Clear	Slightly Turbid	Turbid	Very Turbid _	Color
Aquatic Habitat	Sand Bar Overhanging trees/shrubs	Gravel Bar In-stream emergent plants	Mud Bar In-stream submergent plants	Gravel Riffles Bank root systems	Deep Pools Fringing Wetlands
Aquatic Organisms	Waterfowl	Fish (adult) X Invertebrates X	Fish (juvenile)	Frogs <u>N</u>	Turtles
T/E SPECIES / SUITAB	LE HABITAT (briefly des	cribe potential/occurrence)			
COMMENTS (constructi	Phalanis aread	otential existing disturbance			Manager Manage
Flows	under 1-25-2	2 budges		M	
Rationale for selected ra	(indicate) ink (explain): www.approxs.h	High to (hand flow atifr	sterned bill	bank underneath
High Quality - no indical	tion of stress or disturban	ce in stream or adjacent are rged logs, undercut banks, i	a – diverse and mature frin	iging shrub-domin	nated cover - diverse and
and wildlife habitat - sor		s result in minor recognizabl me habitat diversity – fine se ninate bank vegetation			
activities - stream cours	e channelization or ditchi	ges affecting plant species ng – exotic, nuisance, or inv e suitable wildlife habitat – o	asive species – habitat divi	ersity lacking - hi	

CH2M HILL

DATE_____

Wetland	Determina	ation Da	ata Form	า - Grea	at Plains Re	gion		
Project/Site: I-25/I-80 Interchange		City/	County: Che	eyenne/La	aramie	Sampling Dat	te: 7/31/20	019
Applicant/Owner: Wyoming Dept. of Ti	ransportation				State: W`	Y Sampling Poi	nt: S-5 5	5
Investigator(s): R. Newton, D. Soucy					Section	on, Township, Range:	S36 T14N R67	7 W
Landform (hillslope, terrace, etc.): stream	nside fringe	Loc	cal Relief (co	oncave, co	onvex, none):	minor concave	Slope (%):	0-1
Subregion (LRR): G - Western Great Pla	ains	Lat.	2310	89.6224	Long:	745729.7912	Datum: W	VY E
Soil Map Unit Name: <u>Urban land-Merden co</u>	omplex, 0 to 3 p	ercent slope	S			NWI Classification:	Riverine	.e
Are climatic/hydrologic conditions on the site	typical for this t	ime of year?	Yes	. X	No	(If no, explain in Rem	arks)	
Are Vegetation, Soil, or Hy	ydrology	significantly	disturbed? A	re "Norm	al Circumstance	es" present? Yes	X	No
Are Vegetation, Soil, or Hy	ydrology	naturally pro	blematic?		(If needed, e	explain any answers ir	า Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing sam	pling point l	locations, tı	ransects,	important feat	ures, etc.		
Hydrophytic Vegetation Present? Yes	X No							
Hydric Soil Present? Yes	No X		Is the Sa	mpled Ar	ea within a Wetl	and? Y	es No	Χ
Wetland Hydrology Present? Yes	X No							_
Remarks:								
Riparian area mapped by NWI as riverine. Ar	rea has dominar	nt hydrophtic	vegetation	and wetla	nd hydrology bu	t lacks hydric soils.		
VEGETATION - Use scientific names of pla	ants.							
Torre Observations (Distriction 200,00 ft)	Absolute	Dominant	Indicator		nce Test Work			
<u>Tree Stratum</u> (Plot size: 30x30 ft)	% Cover	Species?	Status		of Dominant Sp OBL, FACW, o		0	(.)
1					ng FAC-):	DI FAC.	2	(A)
3.								
4.					umber of Domina Across All Stra		2	(B)
5.				Оресісз	Acioss All Otta	ia.		_ (b)
J	0 = 7	Total Cover						
 Sapling/Shrub Stratum (Plot size: 15x	(15 ft)	rotal Gover			of Dominant Sp OBL, FACW, o		100%	/
1. Salix exigua	50	Υ	FACW	That Air	GOBL, FACVV, C	DI FAC.	100%	_ (A/B)
2.		<u> </u>	PACW	Provale	nce Index Wor	kshoot:		
3.				litevale	Total % Cove		Multiply b	w.
4				OBL	species		1 = 0	-71.
5.				FACW	species		276	
	50 = 7	Total Cover		FAC	species		3 = 0	
Herb Stratum (Plot size: 5x5 ft)				FACU	species		4 = 0	
1. Phalaris arundinacea	75	Υ	FACW	UPL	species	5 x	5 = 25	
2. Agrostis stolonifera	5	N	FACW	Column	Totals:	143	(A) 301	(B)
3. Euphorbia esula	5	N	NI		Prev	alence Index = B/A =	2.1	
4. Alopecurus pratensis	8	N	FACW	Hydrop	hytic Vegetatio	n Indicators:		
5.					X 1. Rapid 1	Γest for Hydrophytic V	egetation/	
6.					X 2. Domina	ance Test is >50%.		
7.					X 3. Prevale	ence Index is <3.01		
8.		<u></u>			•	ological Adaptations¹ (
9.					porting da	ita in Remarks or on a	a separate shee	∋t)
0.					Problema [*]	tic Hydrophytic Veget	ation (Explain)	
	93 = 7	Total Cover						
Woody Vine Stratum (Plot size: 30x30	∉ft)							
1					¹ Indicators of hy	dric soil and wetland hy	drology must be	<u>;</u>
2					present, unless o	disturbed or problemation	с.	
<u> </u>		= Total Cove	er					
% Bare Ground in Herb Stratum	0 %				Hydrophytic Veg	getation Present?	X Yes	No
Remarks:								
Species with no indicator (NI) are treated as	UPL for this ana	alysis.						

SOIL

S-55

Sampling Point:

Profile Desc	ription: (Describe to	o the depth ne	eded to documer	nt the indica	ator or o	confirm the absent	ce of indicators.)	
Depth	Matrix		F	Redox Feat	ures			
(inches) 0-18	Color (moist)	% C	olor (moist)	%	Type ¹	Loc ²	Texture Sandy Clay	Remarks
0-10	10 11(4/3						Loam	
			 -					-
								-
¹ Type: C=Co	oncentration, D=Dep	letion, RM=Re	duced Matrix, C	S=Covered	or Coa	ted Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil I	ndicators						Indicato	ors for Problematic Hydric Soils ³ :
Histos	sol (A1)			Sandy Gl	leyed M	latrix (S4)		. cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)			Sandy Re	-			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)			Stripped	Matrix ((S6)		Dark Surface (S7) (LRR G)
	gen Sulfide (A4)			_		ineral (F1)		ligh Plains Depressions (F16)
	fied Layers (A5) (LR	RF)		_	-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F,	G, H)		 Depleted	-		F	Reduced Vertic (F18)
Deple	ted Below Dark Sur	face (A11)		Redox Da	ark Sur	face (F6)	F	Red Parent Material (TF2)
Thick	Dark Surface (A12)			_ Depleted	Dark S	surface (F7)		Other (Explain in Remarks)
Sandy	y Mucky Mineral (S1)		Redox De	epressi	ons (F8)	3Indicat	ors of hydrophylic vegetation and
2.5 cr	m Mucky Peat or Pe	at (S2) (LRR (6, H)	– High Plai	ns Dep	ressions (F16)		I hydrology must be present, unless
5 cm	Mucky Peat or Peat	(S3) (LRR F)		(MLRA	72 & 73	of LRR H)	disturbe	ed or problematic.
Restrictive L	.ayer: (if observed)							
Type:	, , , , , , , , , , , , , , , , , , , ,							
Depth (incl	hes):						Hydric So	il Present? Yes No X
Remarks:							, , , , , ,	
remarks.								
HYDROLOG ³	Υ							
Wetland Hyd	Irology Indicators:							
	ators (minimum of c	ne is required,	check all that a	oply)		Se	econdary Indicato	rs (minimum of two required)
Surfac	ce Water (A1)		Sal	t Crust (B1	1)			Surface Soil Cracks (B6)
High \	Water Table (A2)		—— Aqı	uatic Fauna	a (B13)			Sparsley Vegetated Concave Surf. (B8)
Satura	ation (A3)			drogen Sulf		or (C1)		Drainage Patterns (B10)
Water	r Marks (B1)			-Season W				Oxidized Rhizospheres on Living
Sedim	nent Deposits (B2)		Oxio	dized Rhizos	pheres c	on Living Roots (C3)		Roots (C3) (where tilled)
Drift D	Deposits (B3)		(wh	nere not til	led)			Crayfish Burrows (C8)
Algal	Mat or Crust (B4)		Pre	sence of R	educed	Iron (C4)		 Saturation Visible on Aerial Imagery (C9)
Iron D	Deposits (B5)		Thi	n Muck Sur	rface (C	27)	X	Geomorphic Position (D2)
Inund	ation Visible on Aeri	al Imagery (B	7) Oth	er (Explain	in Ren	narks)	X	FAC-Neutral Test (D5)
Water	r-Stained Leaves (B	9)						Frost-Heave Hummocks (D7) (LRR F)
Field Observ	vations:							
Surface Wate	er Present?		Yes	No	х [Depth (inches)		Wetland Hydrology
Water Table	Present?		Yes	No	X [Depth (inches)		Present?
Saturation Pr	esent? (includes ca	pillary fringe)	Yes	No	Х	Depth (inches)		X_YesNo
Remarks:								

Wetland	Determin	nation Da	ata Forn	า - Gre	at Plains Reg	ion		
Project/Site: I-25/I-80 Interchange		City	/County: Che	eyenne/L	aramie	Sampling Dat	te: 7/31/2	2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation				State: WY	Sampling Poir	nt: S- 5	56
Investigator(s): R. Newton, D. Soucy					Section	, Township, Range:	S1 T13N R67	7W
Landform (hillslope, terrace, etc.): minor	depression	Lo	cal Relief <i>(c</i> d	oncave, c	onvex, none):	minor concave	Slope (%)): 0-1
Subregion (LRR): G - Western Great Pla	ins	Lat.	2283	03.2821	Long:	744066.7128	Datum: \	WYE
Soil Map Unit Name: Urban land-Evanston	complex, 0 to	6 percent slop	pes		N	WI Classification:	PEMA/P	EMC
Are climatic/hydrologic conditions on the site	typical for this	time of year?	Yes	, X	No (/	f no, explain in Rema	arks)	
Are Vegetation , Soil , or Hy	drology	significantly	disturbed? A	re "Norm	al Circumstances	" present? Yes	Х	No
Are Vegetation , Soil , or Hy	drology	naturally pro	blematic?		(If needed, ex	plain any answers in	Remarks.)	
SUMMARY OF FINDINGS - Attach site map				ransects.	important featur	res, etc.	,	
Hydrophytic Vegetation Present? Yes		1 31 -		,		,		
Hydric Soil Present? Yes		_	Is the Sa	mnled Ar	ea within a Wetla	nd? Ye	es X No	
_	X No	_	10 1110 00	inpica 7 ti	ca wami a weaa	nd:	<u> </u>	—
_	<u> </u>	_						
Remarks:								
NWI-mapped depressional/fringe palustrine e presence of dominant hydrophytic vegetation			round OW-4	. No right	of-entry for site; h	nydric soils assumed	in	
VEGETATION - Use scientific names of pla		iyurology.						
VEGETATION - Use scientific flames of pla		Dominant	Indicator	Domina	ance Test Works	hoot:		
<u>Tree Stratum</u> (Plot size: 30x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status		of Dominant Spe			
1.				That Are	e OBL, FACW, or	FAC:	2	(A)
2.				(excludi	ing FAC-):	•		_ ` `
3.				Total No	umber of Dominar	nt		
4.				Species	Across All Strata	ı: _	2	(B)
5.								_
_	0 =	Total Cover		Percent	of Dominant Spe	cies		
Sapling/Shrub Stratum (Plot size: 15x	15 ft)			That Are	e OBL, FACW, or	FAC:	100%	(A/B)
1								
2				Prevale	ence Index Works			
3.					Total % Cover		Multiply	
4.				OBL	species		1 = 8	
5.					species		2 = 17	
	=	Total Cover		FAC	species		3 = 0	
Herb Stratum (Plot size: 5x5 ft)		.,	=. 0	FACU	species		4 = 20	
1. Alopecurus pratensis	65	<u>Y</u>	FACW	UPL	species		5 = 0	
2. Eleocharis palustris	8	<u>N</u>	OBL	Column			(A) 20)2 (B)
3. Hordeum jubatum		Y	FACU	Llevelmen		lence Index = B/A =	2.0	
4. Elymus repens	5	<u>N</u>	FACU	нуагор	hytic Vegetation		agatation	
5						est for Hydrophytic Volce Test is >50%.	egetation	
6.						ice Index is <3.01		
7						ogical Adaptations¹ (I	Provide sun-	
9.						a in Remarks or on a		eet)
0.					Problemation	c Hydrophytic Vegeta	ation (Explain	,
·	100 =	Total Cover				orry aropriy ao vogota	Attorn (Explain)	,
Woody Vine Stratum (Plot size: 30x30								
1					¹ Indicators of byde	ric soil and wetland hy	drology must b	
2.						sturbed or problemation		ie
·	0	= Total Cove	er			, , , , ,		
% Bare Ground in Herb Stratum (0 %				Hydrophytic Vege	tation Present?	X Yes	No
Remarks:				1				

(! I \	Matrix			Redox Fea	atures			
(inches)	Color (moist)	% Col	lor (moist)	%	Type ¹	Loc ²	Texture	Remarks
¹ Type: C=Co	oncentration, D=Depleti	ion, RM=Red	uced Matrix, C	S=Covere	d or Coate	ed Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil I	Indicators						Indicate	ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandy (Gleyed Ma	atrix (S4)		L cm Muck (A9) (LRR I, J)
	Epipedon (A2)			_	Redox (S5			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)			_	d Matrix (S			Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)			_	Mucky Mir			High Plains Depressions (F16)
	fied Layers (A5) (LRR I	F)			Gleyed Ma	, ,		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, G ,	•			ed Matrix (• •		Reduced Vertic (F18)
	eted Below Dark Surfac			_	Dark Surfa	•		Red Parent Material (TF2)
	Dark Surface (A12)	()		_		urface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S1)				Depressio	` ,		, ,
		(S2) (I RR G	H)	_		essions (F16)		ors of hydrophylic vegetation and dhydrology must be present, unless
	m Muckv Peat or Peat (. ~						
	m Mucky Peat or Peat (Muckv Peat or Peat (S		_	(MLRA	A 72 & 73 o	of LRR H)	disturb	ed or problematic.
5 cm	Mucky Peat or Peat (S		, <u> </u>	(MLRA	A 72 & 73 o	of LRR H)	disturb	ed or problematic.
5 cm	-			(MLRA	A 72 & 73 o	of LRR H)	disturb	ed or problematic.
5 cm Restrictive L Type:	Mucky Peat or Peat (S _ayer: (if observed)			(MLRA	A 72 & 73 o	of LRR H)		
5 cm	Mucky Peat or Peat (S _ayer: (if observed)			(MLRA	A 72 & 73 o	of LRR H)		il Present? Yes X No
5 cm Restrictive L Type: Depth (inc	Mucky Peat or Peat (S _ayer: (if observed)			(MLRA	A 72 & 73 o	of LRR H)		
5 cm Restrictive L Type: Depth (inc	Mucky Peat or Peat (S _ayer: (if observed)	33) (LRR F)		·			Hydric So	il Present? Yes X No
5 cm Restrictive L Type: Depth (inc Remarks: No right of er	Mucky Peat or Peat (S _ayer: (if observed) thes): htry for this site; no soil	33) (LRR F)		·			Hydric So	il Present? Yes X No
Femarks: No right of er	Mucky Peat or Peat (S _ayer: (if observed) thes): htry for this site; no soil	33) (LRR F)		·			Hydric So	il Present? Yes X No
Restrictive L Type: Depth (inc Remarks: No right of er HYDROLOG Wetland Hyd	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y drology Indicators:	pit dug. Hydr	ic soils assume	ed in prese		minant hydrophy	Hydric So	il Present? Yes X No
Femarks: No right of er HYDROLOG Wetland Hyde	Mucky Peat or Peat (S _ayer: (if observed) _thes):	pit dug. Hydr	ic soils assume	ed in prese	ence of do	minant hydrophy	Hydric So	il Present? Yes X No
Femarks: No right of er HYDROLOG Wetland Hyd Primary Indic	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y Idrology Indicators: Cators (minimum of one	pit dug. Hydr	ic soils assume	ed in prese	ence of do	minant hydrophy	Hydric So	il Present? Yes X No
Femary Indices Type: Depth (inces) Remarks: No right of er HYDROLOG Wetland Hyde Primary Indices Surfa High	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y Chrology Indicators: Eators (minimum of one	pit dug. Hydr	ic soils assume	ed in prese apply) It Crust (B uatic Faur	ence of do 11) na (B13)	minant hydrophy	Hydric So	Il Present? Yes X No Il wetland hydrology. In series (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Femarks: No right of er HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y Chrology Indicators: Cators (minimum of one) Ce Water (A1) Water Table (A2) Cation (A3)	pit dug. Hydr	ic soils assume check all that a	ed in prese apply) It Crust (B uatic Faur drogen Su	ence of do 11) na (B13)	minant hydrophy So	Hydric So	il Present? Yes X No
Restrictive L Type: Depth (inc Remarks: No right of er HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y Idrology Indicators: Cators (minimum of one	pit dug. Hydr	ic soils assume	ed in prese epply) It Crust (B uatic Faur drogen Su y-Season V	ence of do 11) na (B13) ulfide Odor Water Tab	minant hydrophy So r (C1) ble (C2)	Hydric So	wetland hydrology. If
Femary Indices Type: Depth (ince) Remarks: No right of er HYDROLOG Wetland Hyde Primary Indices Surfa High Satur Wate Sedin	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y Chrology Indicators: Cators (minimum of one one one water (A1) Water Table (A2) Cation (A3) In Marks (B1) Innent Deposits (B2)	pit dug. Hydr	ic soils assume check all that a Aq Hy Ox	ed in prese apply) It Crust (B uatic Faur drogen Su y-Season \ idized Rhizo	ence of do 11) na (B13) ulfide Odor Water Tab	minant hydrophy So	Hydric So	wetland hydrology. If
Restrictive L Type: Depth (inc Remarks: No right of er HYDROLOG Wetland Hyo Primary Indic Surfa High Satur Wate Sedin Drift I	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y drology Indicators: Cators (minimum of one) Intry the cators (Minimum of one) Intry this site; no soil Y drology Indicators: Cators (Minimum of one) Intry this site; no soil Y drology Indicators: Cators (Minimum of one) Intry the site; no soil Y drology Indicators: Cators (Minimum of one) Intry this site; no soil Y drology Indicators: Cators (Minimum of one) Intry this site; no soil Y Deposits (B1) Deposits (B3)	pit dug. Hydr	ic soils assume check all that a Aq Hy Dr	ed in prese apply) It Crust (B uatic Faur drogen Su y-Season V idized Rhizo	ence of do 11) na (B13) ulfide Odor Water Tab espheres on	minant hydrophy Sor (C1) Dole (C2) Living Roots (C3)	Hydric So	wetland hydrology. If wetland hydrology. Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Femarks: No right of er HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [Algal	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y Idrology Indicators: Cators (minimum of one	pit dug. Hydr	ic soils assume check all that a Aq Hy Ox (w	ed in prese apply) It Crust (B uatic Faur drogen Su y-Season V idized Rhizo here not t	ence of do 11) na (B13) ulfide Odor Water Tab ospheres on illed) Reduced	minant hydrophy So r (C1) ble (C2) n Living Roots (C3)	Hydric So	il Present? Yes X No I wetland hydrology. In series (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Femarks: No right of er HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y Idrology Indicators: Eators (minimum of one	pit dug. Hydr	ic soils assume check all that a Aq Hy Ox (w Pre	ed in prese apply) It Crust (B uatic Faur drogen Su y-Season V idized Rhizo here not t esence of in Muck Si	ence of do 11) na (B13) ulfide Odor Water Tab espheres on illed) Reduced	minant hydrophy So r (C1) ple (C2) n Living Roots (C3) Iron (C4)	Hydric So	wetland hydrology. I wetland hydrology. Is surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2)
Femarks: No right of er HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [Algal Iron [Inund	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y Chrology Indicators: Cators (minimum of one) Cee Water (A1) Water Table (A2) Cation (A3) or Marks (B1) Chenent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Cation Visible on Aerial	pit dug. Hydr	ic soils assume check all that a Aq Hy Ox (w Pre	ed in prese apply) It Crust (B uatic Faur drogen Su y-Season V idized Rhizo here not t	ence of do 11) na (B13) ulfide Odor Water Tab espheres on illed) Reduced	minant hydrophy So r (C1) ple (C2) n Living Roots (C3) Iron (C4)	Hydric So	wetland hydrology. Is wetland hydrology. Is wetland hydrology. In section (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Comparison of Control of C
Femarks: No right of er HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y drology Indicators: Cators (minimum of one) Ce Water (A1) Water Table (A2) Cation (A3) or Marks (B1) Cheposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Idation Visible on Aerial or Stained Leaves (B9)	pit dug. Hydr	ic soils assume check all that a Aq Hy Ox (w Pre	ed in prese apply) It Crust (B uatic Faur drogen Su y-Season V idized Rhizo here not t esence of in Muck Si	ence of do 11) na (B13) ulfide Odor Water Tab espheres on illed) Reduced	minant hydrophy So r (C1) ple (C2) n Living Roots (C3) Iron (C4)	Hydric So	wetland hydrology. I wetland hydrology. Is surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2)
Restrictive L Type: Depth (inc) Remarks: No right of er HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y Idrology Indicators: Lators (minimum of one	pit dug. Hydr	ic soils assume check all that a Sa Aq Dr Ox Pre Th Ot	ed in prese apply) It Crust (B uatic Faur drogen Su y-Season V idized Rhizo here not t esence of in Muck Si her (Explai	ence of do 11) na (B13) Ilfide Odor Water Tab ospheres on illed) Reduced Reduced in in Rema	minant hydrophy So (C1) Die (C2) Living Roots (C3) Iron (C4) (7) arks)	Hydric So	il Present? Yes X No Il wetland hydrology. In series (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive L Type: Depth (inc Remarks: No right of er HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate Field Observ Surface Wate	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y Idrology Indicators: Eators (minimum of one) Ice Water (A1) Water Table (A2) Intrologiation (A3) In Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Idation Visible on Aerial Introduced (B9) Idrologiations: Interpretation of the peat of	pit dug. Hydr	ic soils assume check all that a Sa Aq Hy Dr Ox (w Pre Th Oth	ed in prese apply) It Crust (B uatic Faur drogen Su y-Season V idized Rhizo here not t esence of in Muck So her (Explai	ance of do 11) na (B13) Ilfide Odor Water Tab Espheres on Illed) Reduced I urface (C7 in in Rema	minant hydrophy So r (C1) Die (C2) n Living Roots (C3) Iron (C4) 7) arks) epth (inches)	Hydric So	il Present? Yes X No Il wetland hydrology. In series (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology
Restrictive L Type: Depth (inc) Remarks: No right of er HYDROLOG Wetland Hyo Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate Field Observ Surface Wate Water Table	Mucky Peat or Peat (S Layer: (if observed) Thes): Intry for this site; no soil Y Idrology Indicators: Eators (minimum of one) Ice Water (A1) Water Table (A2) Intrologiation (A3) In Marks (B1) Inent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) Idation Visible on Aerial Introduced (B9) Idrologiations: Interpretation of the peat of	pit dug. Hydr	ic soils assume check all that a Sa Aq Dr Ox Pre Th Ot	ed in prese apply) It Crust (B uatic Faur drogen Su y-Season V idized Rhizo here not t esence of in Muck Si her (Explai	ence of do 11) na (B13) ulfide Odor Water Tab espheres on illed) Reduced urface (C7 in in Rema	minant hydrophy So (C1) Die (C2) Living Roots (C3) Iron (C4) (7) arks)	Hydric So	il Present? Yes X No Il wetland hydrology. In series (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Determin	nation Data Fo	rm - Great Plains Region	
Project/Site: I-25/I-80 Interchange	City/County:	Cheyenne/Laramie Sampling Date	7/31/2019
Applicant/Owner: Wyoming Dept. of Transportation		State: WY Sampling Point	: S-57
Investigator(s): R. Newton, D. Soucy		Section, Township, Range: S	1 T13N R67W
Landform (hillslope, terrace, etc.): pond	Local Relief	(concave, convex, none): concave	Slope (%): 0-3
Subregion (LRR): G - Western Great Plains	Lat22	28323.8633 Long: 744058.5092	Datum: WY E
Soil Map Unit Name: Urban land-Evanston complex, 0 to	6 percent slopes	NWI Classification:	PEMA/PEMC
Are climatic/hydrologic conditions on the site typical for this	time of year?	Yes X No (If no, explain in Remai	rks)
Are Vegetation , Soil , or Hydrology	significantly disturbed	d? Are "Normal Circumstances" present? Yes	X No
Are Vegetation , Soil , or Hydrology	- naturally problematic	? (If needed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map showing sam	-	· · ·	,
Hydrophytic Vegetation Present? Yes X No	7 37	μ	
Hydric Soil Present? Yes No	- Is the	Sampled Area within a Wetland? Yes	s No X
<u> </u>	-	Campica Aica within a wetland:	
Wetland Hydrology Present? Yes X No	-		
Remarks:			
NHD-mapped stock pond OW-4.			
VEGETATION - Use scientific names of plants.			
Absolute % Cover 1.	Dominant Indicator Species? Status		1 (A)
2		Total Number of Dominant Species Across All Strata:	1 (B)
5.	Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:	100% (A/B)
1		Prevalence Index Worksheet:	
2		Total % Cover of:	Multiply by:
3		OBL species 8 x 1	
4		FACW species 0 x 2	
0 =	Total Cover	FAC species 0 x3	
Herb Stratum (Plot size: 5x5 ft)	Total Cover	FACU species 0 x4	
1. Eleocharis palustris 8	Y OBL	UPL species 0 x 5	
2.		Column Totals: 8 (A	
3.		Prevalence Index = B/A =	1.0
4.		Hydrophytic Vegetation Indicators:	
5.		X 1. Rapid Test for Hydrophytic Ve	getation
6.		X 2. Dominance Test is >50%.	
7.		X 3. Prevalence Index is <3.01	
8. 9.		4. Morphological Adaptations¹ (P	
0.		Problematic Hydrophytic Vegetat	ion (Explain)
Woody Vine Stratum (Plot size: 30x30 ft)	Total Cover	1 adjectors of hydric cell and westland hydr	ralogy must be
2.		Indicators of hydric soil and wetland hydrometric present, unless disturbed or problematic.	ology must be
% Bare Ground in Herb Stratum 92 %	= Total Cover	Hydrophytic Vegetation Present?	X YesNo
Remarks:			

Depth	Matrix			Redox Fe	eatures			
(inches)	Color (moist) %	6 Color (mo	oist)	%	Type ¹	Loc ²	Texture	Remarks
	· · · · · · · · · · · · · · · · · · ·							
		<u> </u>						_
								-
								-
4								
'Type: C=Co	oncentration, D=Depletio	n, RM=Reduced I	Matrix, (CS=Cover	red or Coat	ted Sand Grains.	² Location: PL	=Pore Lining, M=Matrix
Hydric Soil I	ndicators						Indicat	tors for Problematic Hydric Soils ³ :
Histos	sol (A1)			Sandy	Gleyed M	atrix (S4)		1 cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)			Sandy	Redox (S	5)		Coast Prairie Redox (A16) (LRR F, G, H)
Black	Histic (A3)			Strippe	ed Matrix (S6)		Dark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)			Loamy	Mucky Mi	ineral (F1)		High Plains Depressions (F16)
Stratif	fied Layers (A5) (LRR F)	1		Loamy	Gleyed M	latrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F, G, H)		Deplet	ted Matrix	(F3)		Reduced Vertic (F18)
Deple	eted Below Dark Surface	(A11)		Redox	Dark Surf	ace (F6)		Red Parent Material (TF2)
Thick	Dark Surface (A12)			Deplet	ted Dark S	urface (F7)		Other (Explain in Remarks)
	v Musiky Mineral (S1)			Redox	Depression	ons (F8)	³ Indica	tors of hydrophylic vegetation and
Sandy	y Mucky Mineral (S1)				–	roccione (E16)	wetlan	d hydrology must be present, unless
	n Mucky Peat or Peat (S	2) (LRR G, H)		High F	Plains Depr	essions (FTO)	Wetlan	a nyarology mast be present, unless
2.5 cr			_	_	Plains Depr RA 72 & 73 (ped or problematic.
2.5 cm	m Mucky Peat or Peat (S Mucky Peat or Peat (S3)		_	_				
2.5 cm 5 cm	m Mucky Peat or Peat (S			_				
2.5 cm 5 cm Restrictive L Type:	m Mucky Peat or Peat (S Mucky Peat or Peat (S3) .ayer: (if observed)		_ 	_			disturb	ped or problematic.
2.5 cm 5 cm Restrictive L Type: Depth (incl	m Mucky Peat or Peat (S Mucky Peat or Peat (S3) .ayer: (if observed)			_			disturb	
2.5 cm 5 cm Restrictive L Type: Depth (inc) Remarks:	m Mucky Peat or Peat (S Mucky Peat or Peat (S3) .ayer: (if observed) hes):			_			disturb	ped or problematic.
2.5 cm 5 cm Restrictive L Type: Depth (incl	m Mucky Peat or Peat (S Mucky Peat or Peat (S3) .ayer: (if observed) hes):		_ 	_			disturb	ped or problematic.
2.5 cm 5 cm Restrictive L Type: Depth (incompleted) Remarks: Soils not investigated	m Mucky Peat or Peat (S Mucky Peat or Peat (S3 Layer: (if observed) hes): estigated.			_			disturb	ped or problematic.
2.5 cm 5 cm Restrictive L Type: Depth (incl Remarks: Soils not inve	m Mucky Peat or Peat (S Mucky Peat or Peat (S3) Layer: (if observed) hes): estigated.		_	_			disturb	ped or problematic.
2.5 cm 5 cm Type: Depth (incl Remarks: Soils not inve	m Mucky Peat or Peat (S Mucky Peat or Peat (S3 Layer: (if observed) hes): estigated. Y drology Indicators:	(LRR F)	all that	(MLF		of LRR H)	Hydric So	ped or problematic. Dil Present? Yes No
2.5 cm 5 cm Restrictive L Type: Depth (incompleted in the completed in the	m Mucky Peat or Peat (S) Mucky Peat or Peat (S) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is	(LRR F)		(MLF	RA 72 & 73 (of LRR H)	Hydric So	poil Present? Yes No
2.5 cm 5 cm Type: Depth (incl Remarks: Soils not inve	m Mucky Peat or Peat (S) Mucky Peat or Peat (S3) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is ce Water (A1)	(LRR F)	S	(MLF apply) alt Crust (B11)	of LRR H)	Hydric So	poil Present? Yes No
2.5 cm 5 cm Restrictive L Type: Depth (incompleted in the completed in the	m Mucky Peat or Peat (S) Mucky Peat or Peat (S3) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is ce Water (A1) Water Table (A2)	(LRR F)	S	apply) alt Crust (i	B11) una (B13)	of LRR H)	Hydric So	poil Present? Yes No Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
2.5 cm 5 cm Restrictive L Type: Depth (incompleted in the completed in the	m Mucky Peat or Peat (S) Mucky Peat or Peat (S3) Layer: (if observed) hes): estigated. Y drology Indicators: cators (minimum of one is ce Water (A1) Water Table (A2) ation (A3)	(LRR F)	Si	apply) alt Crust (quatic Fau	B11) una (B13) Sulfide Odd	of LRR H) Sor (C1)	Hydric So	poil Present? Yes No
2.5 cm 5 cm Restrictive L Type: Depth (incompleted in the completed in the	m Mucky Peat or Peat (S) Mucky Peat or Peat (S) Mucky Peat or Peat (S) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is ce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	(LRR F)	Sa A	apply) alt Crust (quatic Fau ydrogen S	B11) una (B13) Sulfide Odo	of LRR H) Sor (C1) ble (C2)	Hydric So	poil Present? Yes No Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
2.5 cm 5 cm Restrictive L Type: Depth (incompleted in the completed in the	m Mucky Peat or Peat (S) Mucky Peat or Peat (S3) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2)	(LRR F)	Si Ai Hi D	apply) alt Crust (in quatic Fausydrogen Stry-Season	B11) una (B13) Sulfide Odo n Water Ta	of LRR H) Sor (C1)	Hydric So	poil Present? Yes No Discrete No Present? Yes No Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
2.5 cm 5 cm Restrictive L Type: Depth (incompleted incompleted inc	m Mucky Peat or Peat (S) Mucky Peat or Peat (S) Mucky Peat or Peat (S3) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)	(LRR F)	Si Ai	apply) alt Crust (in the content of	B11) una (B13) Sulfide Odo n Water Ta	of LRR H) Sor (C1) ble (C2) n Living Roots (C3)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
2.5 cm 5 cm Restrictive L Type: Depth (incompleted incompleted inc	m Mucky Peat or Peat (S) Mucky Peat or Peat (S) Mucky Peat or Peat (S) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is ece Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)	(LRR F)	S: A/A D O: (v	apply) alt Crust (quatic Fau ydrogen S ry-Season kidized Rhiz where not resence o	B11) una (B13) Sulfide Odo n Water Ta zospheres o tilled) f Reduced	of LRR H) So or (C1) ble (C2) n Living Roots (C3)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8)
2.5 cm 5 cm Restrictive L Type: Depth (incompleted incompleted inc	m Mucky Peat or Peat (S) Mucky Peat or Peat (S3) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	s required; check	S: AA H; D O: (v V P) T1	apply) alt Crust (quatic Fau ydrogen S ry-Season xidized Rhiz where not resence o	B11) una (B13) Sulfide Odo n Water Ta zospheres o tilled) f Reduced Surface (C	of LRR H) Solver (C1) ble (C2) n Living Roots (C3) Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2)
2.5 cm 5 cm Restrictive L Type: Depth (inc) Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfac High \ Satura Watel Sedim Drift D Algal Iron D	m Mucky Peat or Peat (S) Mucky Peat or Peat (S) Mucky Peat or Peat (S) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aerial In	s required; check	S: AA H; D O: (v V P) T1	apply) alt Crust (quatic Fau ydrogen S ry-Season xidized Rhiz where not resence o	B11) una (B13) Sulfide Odo n Water Ta zospheres o tilled) f Reduced	of LRR H) Solver (C1) ble (C2) n Living Roots (C3) Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C5) Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm Festrictive L Type: Depth (inc) Remarks: Soils not inversely HYDROLOG Wetland Hyd Primary Indic X Surfac High \ Satura Watel Sedim Drift D Algal Iron D	m Mucky Peat or Peat (S) Mucky Peat or Peat (S3) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	s required; check	S: AA H; D O: (v V P) T1	apply) alt Crust (quatic Fau ydrogen S ry-Season xidized Rhiz where not resence o	B11) una (B13) Sulfide Odo n Water Ta zospheres o tilled) f Reduced Surface (C	of LRR H) Solver (C1) ble (C2) n Living Roots (C3) Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2)
2.5 cm 5 cm Restrictive L Type: Depth (inc) Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfac High \ Satura Watel Sedim Drift D Algal Iron D	m Mucky Peat or Peat (S) Mucky Peat or Peat (S) Mucky Peat or Peat (S) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aerial In r-Stained Leaves (B9)	s required; check	S: AA H; D O: (v V P) T1	apply) alt Crust (quatic Fau ydrogen S ry-Season xidized Rhiz where not resence o	B11) una (B13) Sulfide Odo n Water Ta zospheres o tilled) f Reduced Surface (C	of LRR H) Solver (C1) ble (C2) n Living Roots (C3) Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C5) Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm Festrictive L Type: Depth (inc) Remarks: Soils not inve HYDROLOG Wetland Hyd Primary Indic X Surfac High \ Satura Water Sedim Drift D Algal Iron D Inund Water	m Mucky Peat or Peat (S) Mucky Peat or Peat (S) Mucky Peat or Peat (S) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is eators (Minimum of one is eators (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aerial In r-Stained Leaves (B9) vations:	s required; check	S: AA H; D O: (v V P) T1	apply) alt Crust (quatic Fau ydrogen S ry-Season xidized Rhiz where not resence o nin Muck S ther (Expl	B11) una (B13) Sulfide Odo n Water Ta zospheres o tilled) f Reduced Surface (C ain in Rem	of LRR H) Solver (C1) ble (C2) n Living Roots (C3) Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C5) Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm Festrictive L Type: Depth (incompleted incompleted inc	m Mucky Peat or Peat (S) Mucky Peat or Peat (S3) Layer: (if observed) hes): estigated. Y drology Indicators: eators (minimum of one is ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aerial In r-Stained Leaves (B9) vations: er Present?	s required; check	Si Ai	apply) alt Crust (quatic Fau ydrogen S ry-Season kidized Rhiz where not resence o nin Muck S ther (Expl	B11) Juna (B13) Sulfide Odo Water Ta zospheres o tilled) f Reduced Surface (C ain in Rem	of LRR H) So or (C1) ble (C2) n Living Roots (C3) Iron (C4) 7) narks)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determin	ation Da	ata Forn	1 - Gre	at Plains Reç	gion		
Project/Site: I-25/I-80 Interchange		City	/County: Che	eyenne/L	aramie	Sampling Da	ate: 7/3	31/2019
Applicant/Owner: Wyoming Dept. of Tra	ansportation				State: WY	Sampling Po	oint:	S-58
Investigator(s): R. Newton, D. Soucy					Sectio	on, Township, Range	: S1 T13N R	₹67W
Landform (hillslope, terrace, etc.): minor of	depression	Lo	cal Relief (co	oncave, c	onvex, none):	minor concave	Slope ((%): 0-1
Subregion (LRR): G - Western Great Pla	ins	Lat	. 2282	29.6525	Long:	744061.81	Datur	n: WYE
Soil Map Unit Name: Urban land-Evanston o	complex, 0 to 6	6 percent slo	pes			NWI Classification:	PEMA	VPEMC
Are climatic/hydrologic conditions on the site t	ypical for this	time of year?	? Yes	s X	No	(If no, explain in Rer	narks)	
Are Vegetation , Soil , or Hy	drology	significantly	disturbed? A	Are "Norm	al Circumstance	s" present? Yes	X	(No
<u> </u>		naturally pro				xplain any answers		
SUMMARY OF FINDINGS - Attach site map		•		rancocte	•		III I (CITICINO.)	,
		ipinig point	iocations, t	iansecis,	important leatt	ures, etc.		
Hydrophytic Vegetation Present? Yes		-	0			10	.,	
Hydric Soil Present? Yes	No X	•	is the Sa	ımpıea Ar	ea within a Wetla	and?	Yes N	lo <u>X</u>
Wetland Hydrology Present? Yes	X No	-						
Remarks:								
Area mapped by NWI as PEM and NHD as wa	aterbody lackir	ng indicators	of both.					
VEGETATION - Use scientific names of pla	nts.							
True Otrotomy (Districts 200,00 ft)	Absolute	Dominant	Indicator		ance Test Works			
Tree Stratum (Plot size: 30x30 ft)	% Cover	Species?	Status		r of Dominant Sp			
1					e OBL, FACW, c <i>ing FAC-)</i> :	or FAC.	2	(A)
2								
3					umber of Domina		0	(5)
4				Species	Across All Strat	ıa:	2	(B)
5	0 =	Total Cavar						
O and the wide to the character of the control of t		Total Cover			of Dominant Sp		1000/	(. (=)
Sapling/Shrub Stratum (Plot size: 15x1	15 ft)			That Ar	e OBL, FACW, o	or FAC:	100%	(A/B)
1				<u> </u>				
2				Prevale	ence Index Worl		N A Letter	le e le cer
3				ODI	Total % Cover		Multip	
4				OBL	species		<u>x</u> 1=	8
5		T-1-1-0		FACW	•			174
Harb Stratum /Diet aize.	0 =	Total Cover		FAC	species		<u>x</u> 3 =	0
Herb Stratum (Plot size: 5x5 ft)	GE.	V	EA C\\\	FACU	•			20
1. Alopecurus pratensis	65	<u>Y</u>	FACW	UPL	species		<u>x</u> 5 =	0 (5)
2. Eleocharis palustris	8	N	OBL	Column		100		202 (B)
3. Hordeum jubatum		<u>Y</u>	FACW	Uhadaaa		alence Index = B/A =	= 2.0	
4. Elymus repens	5	N	FACU	Hydrop	hytic Vegetation		Vocatation	
5						est for Hydrophytic	vegetation	
6.						ince Test is >50%.		
7						ence Index is <3.01 logical Adaptations1	(Provide sur	0-
8					•	ta in Remarks or on		
9					. •		·	ŕ
0	100 =	Total Cover			Problemat	tic Hydrophytic Vege	auon (⊏xpla	лн I <i>)</i>
N/a a di i Viina Chinatium (Diat aina - 20) 20 d		Total Cover						
Woody Vine Stratum (Plot size: 30x30	π_)							
1					•	dric soil and wetland h		t be
2		- Total O		<u> </u>	present, unless d	listurbed or problemat	ilC.	
% Para Craund in Harb Stratum	0	= Total Cov	C I		Hardwan bardin Mari	estation Duc	V v	, NI-
% Bare Ground in Herb Stratum 0	%				nyaropnytic Veg	getation Present?	X Yes	No
Remarks:								

Matrix Color (moist) 10 YR 4/2 2.5 Y 6/3	% 100 100	Color (moist)	Redox Fe	Type ¹	Loc ²	Texture	Remarks
10 YR 4/2	100	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
2.5 Y 6/3	100					Clay Loam	
	100					Clay	
entration, D=Dep	letion, RM=F	Reduced Matrix,	CS=Cove	red or Coa	ted Sand Grains.	² Location: PL=Po	ore Lining, M=Matrix
cators						Indicators	for Problematic Hydric Soils ³ :
			Sandy	/ Gleyed M	latrix (S4)		m Muck (A9) (LRR I, J)
		_		-			ast Prairie Redox (A16) (LRR F, G, H)
stic (A3)		_	 Stripp	ed Matrix ((S6)		rk Surface (S7) (LRR G)
` ,		_					h Plains Depressions (F16)
	RF)	-		-			LRR H outside of MLRA 72 & 73)
		_			` '	•	duced Vertic (F18)
		_					d Parent Material (TF2)
rk Surface (A12)		_	 Deple	ted Dark S	Surface (F7)	—— Oth	ner (Explain in Remarks)
ucky Mineral (S1)	_	Redox	k Depression	ons (F8)	3Indicator	s of hydrophylic vegetation and
lucky Peat or Pe	at (S2) (LRR	- (G, H)	— High F	Plains Dep	ressions (F16)		ydrology must be present, unless
cky Peat or Peat	(S3) (LRR F	·) –	(ML	RA 72 & 73	of LRR H)	disturbed	or problematic.
are (if a base (ad)						I	
ar. (II observed)							
<u> </u>						Unadaia Cail I	Duna and 2
						Hydric Soil	Present? Yes No X
ogy Indicators:							
	ne is require	d; check all that	apply)		s	econdary Indicators	(minimum of two required)
	·			(B11)		-	Surface Soil Cracks (B6)
` '				. ,			Sparsley Vegetated Concave Surf. (B8)
` ,			•	` '	or (C1)		Drainage Patterns (B10)
arks (B1)			-				Oxidized Rhizospheres on Living
t Deposits (B2)) Dxidized Rhi	zospheres o	on Living Roots (C3)		Roots (C3) (where tilled)
			where not	tilled)	, ,		Crayfish Burrows (C8)
t or Crust (B4)		F	Presence c	of Reduced	Iron (C4)		Saturation Visible on Aerial Imagery (C9)
osits (B5)			hin Muck	Surface (C	(7)	X	Geomorphic Position (D2)
on Visible on Aeri	ial Imagery (I	B7) — (Other (Exp	lain in Rem	narks)	X	FAC-Neutral Test (D5)
ained Leaves (B	9)	· —	, ,		ŕ		Frost-Heave Hummocks (D7) (LRR F)
ons:							
U113.		Yes	NI.	o X [Depth (inches)		Watland Hudralagu
resent?		100	IN	- <u> </u>	- chai (mones)		Wetland Hydrology
Present?		_	NI.	<u>х</u> г	Depth (inches)		Present?
Present? esent? ent? <i>(includes ca</i> p	nillary fringe)	Yes			Depth (inches) Depth (inches)		Present? X Yes No
in () in a limit of the limit	cators (A1) ipedon (A2) stic (A3) in Sulfide (A4) Layers (A5) (LR ck (A9) (LRR F, Below Dark Sur rk Surface (A12) ucky Mineral (S1 flucky Peat or Peat cky Peat or Peat er: (if observed) i): logy Indicators: rs (minimum of co Water (A1) ter Table (A2) in (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) in Visible on Aericained Leaves (B	cators (A1) ipedon (A2) stic (A3) in Sulfide (A4) Layers (A5) (LRR F) ck (A9) (LRR F, G, H) Below Dark Surface (A11) rk Surface (A12) ucky Mineral (S1) flucky Peat or Peat (S2) (LRR cky Peat or Peat (S3) (LRR Fer: (if observed) cy (if observed)	cators (A1) ipedon (A2) stic (A3) n Sulfide (A4) Layers (A5) (LRR F) ck (A9) (LRR F, G, H) Below Dark Surface (A11) rk Surface (A12) ucky Mineral (S1) flucky Peat or Peat (S2) (LRR G, H) cky Peat or Peat (S3) (LRR F) er: (if observed) s): logy Indicators: rs (minimum of one is required; check all that water (A1) ter Table (A2) In (A3) arks (B1) t Deposits (B2) osits (B3) t or Crust (B4) osits (B5) on Visible on Aerial Imagery (B7) cained Leaves (B9)	cators (A1)	(A1) Sandy Gleyed M Sandy Redox (S Stic (A3) Stripped Matrix (Loamy Mucky M Layers (A5) (LRR F) Loamy Gleyed M Below Dark Surface (A11) Redox Dark Surface (A12) Depleted Dark S Cucky Mineral (S1) Redox Depression Cucky Peat or Peat (S2) (LRR G, H) City Peat or Peat (S3) (LRR F) (MLRA 72 & 73 Correct (if observed) Correct (A12) Salt Crust (B11) Correct (A13) Salt Crust (B11) Correct (A13) Aquatic Fauna (B13) Correct (B1) Aquatic Fauna (B13) Correct (B2) Correct (B2) Correct (B4) Aquatic Fauna (B13) Correct (B4) Aquatic Fauna (Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) High Plains Depressions (F16) (MLRA 72 & 73 of LRR H) Per: (if observed) Solit Crust (B11) Aquatic Fauna (B13) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) osits (B3) tor Crust (B4) Osits (B5) Thin Muck Surface (C7) Other (Explain in Remarks) ained Leaves (B9)	cators (A1) Sandy Gleyed Matrix (S4) 1 c ipedon (A2) Sandy Redox (S5) Coistic (A3) Stripped Matrix (S6) Dan Sulfide (A4) Loamy Mucky Mineral (F1) High Layers (A5) (LRR F) Loamy Mucky Mineral (F1) High Below Dark Surface (A11) Redox Dark Surface (F6) Retrieve Surface (A12) Depleted Matrix (F3) Redox Dark Surface (F7) Depleted Dark Surface (F7) Surface (F7) Depleted Dark

Wetland Dete	rmination Da	ata Form	- Grea	at Plains Re	gion		
Project/Site: I-25/I-80 Interchange	City	/County: Che	yenne/La	ramie	Sampling Da	ate: 7/31/2	2019
Applicant/Owner: Wyoming Dept. of Transpor	tation			State: W	Y Sampling Po	int: S-5	59
Investigator(s): R. Newton, D. Soucy				Section	on, Township, Range	S2 T13N R67	w
Landform (hillslope, terrace, etc.): depression	Lo	cal Relief (cor	ncave, co	onvex, none):	concave	Slope (%)	: 0-1
Subregion (LRR): G - Western Great Plains	Lat.	. 22794	1.8682	Long:	743930.2093	Datum: \	WYE
Soil Map Unit Name: Poposhia-Trimad complex, 3	to 15 percent slopes	S			NWI Classification:	UPL	
Are climatic/hydrologic conditions on the site typical	for this time of year?	? Yes	X	No	(If no, explain in Ren	narks)	
Are Vegetation , Soil , or Hydrology	significantly	disturbed? Ar	e "Norma	al Circumstance	es" present? Yes	X	No
Are Vegetation , Soil , or Hydrology	naturally pro	oblematic?		(If needed, e	explain any answers	in Remarks.)	
SUMMARY OF FINDINGS - Attach site map showi	ng sampling point	locations, tra	ansects,	important feat	ures, etc.		
	lo						
Hydric Soil Present? Yes X		Is the San	npled Are	ea within a Wetl	and?	res X No	
	40 		•				—
Remarks:							
Nemarks.							
Depressional palustrine emergent wetland PEM-19.							
VEGETATION - Use scientific names of plants.				- ()*/ 1			
Absormation Absormation (Plot size: 30x30 ft) % Co		Indicator Status		nce Test Work of Dominant Sp			
1	эчег орошея:			OBL, FACW, o		1	(A)
2				ng FAC-):			_ (^)
3.			Total Nu	umbar of Damin	ant.		
4.				mber of Domina Across All Stra		1	(B)
5.						· ·	_ (5)
Sapling/Shrub Stratum (Plot size: 15x15 ft 1.	Total Cover			of Dominant Sp OBL, FACW, o		100%	(A/B)
2.			Prevale	nce Index Wor	ksheet:		
3.				Total % Cove	r of:	Multiply	by:
4.			OBL	species	80	x 1 = 80)
5.			FACW	species	15	x 2 = 30)
0	= Total Cover		FAC	species	0	x 3 = 0	
Herb Stratum (Plot size: 5x5 ft)			FACU	species	3	x 4 = 12	2
1. Eleocharis palustris 8	0 Y	OBL	UPL	species	0 :	x 5 = 0	
2. Alopecurus pratensis 1.	5 N	FACW	Column	Totals:	98	(A) 12	(B)
3. Elymus repens	8 N	FACU			alence Index = B/A =	= 1.2	
4			Hydropi	nytic Vegetatio			
5					Test for Hydrophytic	Vegetation	
6					ance Test is >50%.		
7					ence Index is <3.01	(D.	
8					ological Adaptations ¹ Ita in Remarks or on		act)
9				_			
0	O Total Cover			Problema	tic Hydrophytic Vege	tation (Explain))
Weedy Vine Stratum (Diet size) 20/20 ft	8 = Total Cover						
Woody Vine Stratum (Plot size: 30x30 ft)				1			
<u> </u>					dric soil and wetland h		е
2				present, unless o	disturbed or problemat	il.	
	= 1 otal Cove	⊡ I		Hydrophytic Veg	getation Present?	XYes	No
Remarks:			<u> </u>				

Depth	Matrix			Redox F	eatures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10 YR 4/2	100					Clay Loam		
4-11	10 YR 3/2	95	7.5 YR 4/6	5	С	M	Clay		
11-16	10 YR 5/3	100							
¹ Type: C=C	oncentration, D=Dep	oletion PM	-Reduced Matrix	CS=Cove	ered or Co	ated Sand Grains	² Location: PL-	Pore Lining, M=Matrix	
		——————————————————————————————————————	-i teduced iviatilix	, 03-0076	ered or Coa	ateu Sanu Grains.			
Hydric Soil I				Cond	v Clayed N	Motrix (CA)		ors for Problematic Hydric Soils ³ :	
	sol (A1)		-		y Gleyed i y Redox (S	Matrix (S4)		1 cm Muck (A9) (LRR I, J)	
	Epipedon (A2) Histic (A3)		-		y Redox (s oed Matrix	· ·		Coast Prairie Redox (A16) (LRR F, G, H)	
	` ,		-			` '		Dark Surface (S7) (LRR G)	
	ogen Sulfide (A4)	3D E\	-			Mineral (F1)	'	High Plains Depressions (F16)	
	ified Layers (A5) (LF	-	-			Matrix (F2)		(LRR H outside of MLRA 72 & 73)	
	Muck (A9) (LRR F,		·-		eted Matrix			Reduced Vertic (F18)	
	eted Below Dark Sui Dark Surface (A12	, ,	-		x Dark Su			Red Parent Material (TF2) Other (Explain in Remarks)	
	,	,	-		x Depress	Surface (F7)		, .	
	ly Mucky Mineral (S m Mucky Peat or Pe	•	ВРС H/		•	pressions (F16)		tors of hydrophylic vegetation and	
	ili wucky i eat of i e	at (02) (Li	-					: =: :	
	2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F)			(841	DA 72 9. 72	of IDD ∐\	wetland hydrology must be present, unless disturbed or problematic.		
	Mucky Peat or Pea	t (S3) (LRR	R F)	(ML	.RA 72 & 73	3 of LRR H)	1		
5 cm	Mucky Peat or Pea		R F)	(ML	.RA 72 & 73	3 of LRR H)			
5 cm Restrictive I Type:	Layer: (if observed)		R F) 	(ML	.RA 72 & 73	3 of LRR H)			
5 cm	Layer: (if observed)		R F) - 	(ML	.RA 72 & 73	3 of LRR H)		oil Present? Yes X No	
5 cm Restrictive I Type:	Layer: (if observed)		R F) 	(ML	.RA 72 & 73	3 of LRR H)			
5 cm Restrictive I Type: Depth (inc	Layer: (if observed)		R F) 	(ML	RA 72 & 73	3 of LRR H)			
5 cm Restrictive I Type: Depth (inc.) Remarks:	Layer: (if observed)		R F)	(ML	RA 72 & 73	3 of LRR H)			
Festrictive I Type: Depth (inc.) Remarks:	Layer: (if observed)		R F)	(ML	RA 72 & 73	3 of LRR H)			
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd	Layer: (if observed) ches):				RA 72 & 73		Hydric So	vil Present? Yes X No	
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	Layer: (if observed) ches): GY drology Indicators: cators (minimum of cators)		ired; check all tha	t apply)			Hydric So	ors (minimum of two required)	
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	ches): Grant Gran		ired; check all tha	<i>t apply)</i> Salt Crust	(B11)	S	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6)	
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa High	ches): drology Indicators: cators (minimum of ace Water (A1) Water Table (A2)		ired; check all tha	<i>t apply)</i> Salt Crust Aquatic Fa	(B11) nuna (B13)	S	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)	
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	ches): drology Indicators: cators (minimum of once Water (A1) Water Table (A2) ration (A3)		ired; check all tha	<i>t apply)</i> Salt Crust Aquatic Fa Hydrogen	(B11) una (B13) Sulfide Od	S lor (C1)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6)	
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	ches): GY drology Indicators: cators (minimum of of other (A1)) Water Table (A2) ration (A3) or Marks (B1)		ired; check all tha	<i>t apply)</i> Salt Crust Aquatic Fa Hydrogen Dry-Seaso	(B11) iuna (B13) Sulfide Od in Water T	Solor (C1) Sable (C2)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)	
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	ches): GY drology Indicators: cators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2)		ired; check all tha	<i>t apply)</i> Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh	(B11) nuna (B13) Sulfide Od n Water T izospheres	S lor (C1)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living	
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I	ches): drology Indicators: cators (minimum of other of the cator): Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3)		ired; check all tha	t apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh	(B11) tuna (B13) Sulfide Od n Water T izospheres t tilled)	Solor (C1) Sable (C2) on Living Roots (C3)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)	
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal	ches): GY drology Indicators: cators (minimum of acce Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)		ired; check all tha	t apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no	(B11) una (B13) Sulfide Od n Water Tizospheres t tilled) of Reduce	Solor (C1) Table (C2) On Living Roots (C3) d Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9	
Festrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I	ches): GY drology Indicators: cators (minimum of orace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	: one is requi	ired; check all tha	t apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of	(B11) Sulfide Od In Water T izospheres t tilled) of Reduced Surface (6	Solution (C1) Sable (C2) On Living Roots (C3) d Iron (C4) C7)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)	
Festrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund	ches): GY drology Indicators: cators (minimum of acce Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	: one is requi	ired; check all tha	t apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no	(B11) Sulfide Od In Water T izospheres t tilled) of Reduced Surface (6	Solution (C1) Sable (C2) On Living Roots (C3) d Iron (C4) C7)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9	
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate	ches): drology Indicators: cators (minimum of other): water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aeier-Stained Leaves (E	: one is requi	ired; check all tha	t apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of	(B11) Sulfide Od In Water T izospheres t tilled) of Reduced Surface (6	Solution (C1) Solution (C2) Solution (C3) Solution (C4) Solution (C4) Solution (C4) Solution (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)	
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inunc Wate	ches): GY drology Indicators: cators (minimum of other (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aeronal Control (B4) or Stained Leaves (Examples)	: one is requi	ired; check all tha	t apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of Thin Muck Other (Exp	(B11) Juna (B13) Sulfide Od In Water To Izospheres It tilled) Of Reducer Surface (Colain in Ret	Solution (C1) Table (C2) On Living Roots (C3) d Iron (C4) C7) marks)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)	
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate Field Observ Surface Wate	ches): GY drology Indicators: cators (minimum of ace Water (A1) Water Table (A2) reation (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer er-Stained Leaves (Evations: er Present?	: one is requi	ired; check all tha	t apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of Thin Muck Other (Exp	(B11) Sulfide Od n Water T izospheres t tilled) of Reducer Surface (Golain in Red	Solution (C1) Sable (C2) Son Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)	
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate Field Observ Surface Wate Water Table	ches): GY drology Indicators: cators (minimum of ace Water (A1) Water Table (A2) reation (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer er-Stained Leaves (Evations: er Present?	: one is requi	ired; check all that	t apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of Thin Muck Other (Exp	(B11) luna (B13) Sulfide Od n Water T. izospheres t tilled) of Reducer Surface (Colain in Red	Solution (C1) Fable (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)	

Wetland	Determinat	ion Data	a Form	- Grea	at Plains Reg	ion		
Project/Site: I-25/I-80 Interchange		City/Co	ounty: Chey	enne/La	aramie	Sampling Da	te: 7/31/2	2019
Applicant/Owner: Wyoming Dept. of Tra	ansportation				State: WY	Sampling Poi	nt: S-6	0
Investigator(s): R. Newton, D. Soucy					Section	, Township, Range:	S2 T13N R67	w
Landform (hillslope, terrace, etc.): toe of s	slope	Local	Relief (con	cave, co	onvex, none):	none	Slope (%):	: 0
Subregion (LRR): G - Western Great Pla	ins	Lat.	227936	6.4126	Long:	743937.3139	Datum: \	WYE
Soil Map Unit Name: Poposhia-Trimad comp	plex, 3 to 15 perce	ent slopes			N	WI Classification:	UPL	-
Are climatic/hydrologic conditions on the site t	ypical for this time	e of year?	Yes	Χ	No(/	f no, explain in Rem	ıarks)	
Are Vegetation , Soil , or Hy	drology sig	nificantly dis	sturbed? Are	e "Norm	al Circumstances	" present? Yes	Χ	No
Are Vegetation , Soil , or Hy	drology nat	urally proble	ematic?		(If needed, ex	plain any answers i	n Remarks.)	
SUMMARY OF FINDINGS - Attach site map	showing sampli	ng point loc	cations, tra	nsects,	important featur	res, etc.		
Hydrophytic Vegetation Present? Yes	No X							
Hydric Soil Present? Yes	No X		Is the Sam	pled Are	ea within a Wetla	nd? Y	es No	X
Wetland Hydrology Present? Yes	No X			•				
Remarks:	<u> </u>							
Paired upland point for PEM-19. VEGETATION - Use scientific names of pla	nto.							
VEGETATION - Use scientific names of pla		min ant le	ndicator	Domina	nce Test Works	heet:		
<u>Tree Stratum</u> (Plot size: 30x30 ft)					of Dominant Spe			
1.			ŀ	That Are	OBL, FACW, or	FAC:	1	(A)
2.				(excludi	ng FAC-):		-	_ ` '
3.				Total Nu	ımber of Dominar	nt		
4.					Across All Strata		2	(B)
5.								_
Sapling/Shrub Stratum (Plot size: 15x1	0 = Tota 15 ft)	al Cover			of Dominant Spe e OBL, FACW, or		50%	(A/B)
2.				Prevale	nce Index Works	sheet:		
3.					Total % Cover	of:	Multiply	by:
4.				OBL	species	0 >	(1 = 0	
5.				FACW	species	30 >	(2 = 60)
	0 = Tota	al Cover		FAC	species	0 >	3 = 0	
Herb Stratum (Plot size: 5x5 ft)				FACU	species	15	4 = 60)
1. Bromus inermis	35	Υ	UPL	UPL	species	35 x	5 = 17	5
2. Alopecurus pratensis	25	Y [FACW_	Column	Totals:	80	(A) 295	5 (B)
3. Agrostis stolonifera	5		FACW			lence Index = B/A =	3.7	
4. Elymus trachycaulus	15	N	FACU	Hydrop	hytic Vegetation			
5						est for Hydrophytic \	egetation/	
6.						nce Test is >50%.		
7						nce Index is <3.01	.	
8					•	ogical Adaptations¹ (a in Remarks or on a		et)
9							·	,
10	80 = Tota	al Cover			Problematio	c Hydrophytic Veget	ation (Explain))
Woody Vine Stratum (Plot size: 30x30		ai Covei						
VVOOdy VIIIe Stratum (Flot size. 30x30	<u> </u>				1			
2					•	ric soil and wetland hy	٠.	е
	0 = T	otal Cover			present, unless als	sturbed or problemati	·.	
% Bare Ground in Herb Stratum 20		olai Guvei			Hydrophytic Vege	etation Present?	Yes	X No
Remarks:								

Depth	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	10 YR 4/2	100					clay loam	
7-18	10 YR 5/3	80	7.5 YR 4/6	20	С	М	Sand	
¹ Type: C=Co	oncentration, D=Deple	etion, RM=F	Reduced Matrix,	CS=Cove	red or Co	ated Sand Grains.	² Location: PL	=Pore Lining, M=Matrix
Hydric Soil	Indicators						Indica	tors for Problematic Hydric Soils ³ :
Histo	sol (A1)			Sandy	Gleyed I	Matrix (S4)		1 cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)		_	— Sandy	Redox (S5)		Coast Prairie Redox (A16) (LRR F, G, H)
Black	Histic (A3)		_	— Stripp	ed Matrix	(S6)		Dark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)		_	 Loam	y Mucky I	Mineral (F1)		High Plains Depressions (F16)
Strati	ified Layers (A5) (LRF	R F)	_	Loam	y Gleyed	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm	Muck (A9) (LRR F, G	S , H)	_	— Deple	ted Matrix	x (F3)		Reduced Vertic (F18)
Deple	eted Below Dark Surfa	ace (A11)	_	Redox	x Dark Su	ırface (F6)		Red Parent Material (TF2)
Thick	Dark Surface (A12)		_	Deple	ted Dark	Surface (F7)		Other (Explain in Remarks)
Sand	ly Mucky Mineral (S1))	_	Redox	x Depress	sions (F8)	³ Indica	ators of hydrophylic vegetation and
		at (S2) (I RR	R G. H)	— High F	Plains De _l	pressions (F16)		nd hydrology must be present, unless
2.5 c	m Mucky Peat or Pea	(OL) (L						
	m Mucky Peat or Peat ((MLI	RA 72 & 73	3 of LRR H)	distur	bed or problematic.
5 cm	-			(MLI	RA 72 & 73	3 of LRR H)	distur	bed or problematic.
5 cm	Mucky Peat or Peat ((MLI	RA 72 & 73	3 of LRR H)	disturl	bed or problematic.
5 cm	Mucky Peat or Peat (Layer: (if observed)			(MLI	RA 72 & 73	3 of LRR H)		
5 cm Restrictive I Type: Depth (inc.)	Mucky Peat or Peat (Layer: (if observed)			(MLI	RA 72 & 73	3 of LRR H)		
5 cm Restrictive I Type:	Mucky Peat or Peat (Layer: (if observed)			(MLI	RA 72 & 73	3 of LRR H)		
5 cm Restrictive I Type: Depth (incompress) Remarks:	Mucky Peat or Peat (Layer: (if observed) ches):			(MLI	RA 72 & 73	3 of LRR H)		
5 cm Restrictive I Type: Depth (inc) Remarks:	Mucky Peat or Peat (Layer: (if observed) ches):			(MLI	RA 72 & 73	3 of LRR H)		
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat (Layer: (if observed) ches): GY drology Indicators:	(S3) (LRR F			RA 72 & 73		Hydric S	oil Present? Yes No X
Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyde	Mucky Peat or Peat (Layer: (if observed) ches): drology Indicators: cators (minimum of or	(S3) (LRR F	ed; check all that	apply)			Hydric S	oil Present? Yes No X
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	Mucky Peat or Peat (Layer: (if observed) ches): GY drology Indicators: cators (minimum of or ace Water (A1)	(S3) (LRR F	ed; check all that	apply)	(B11)	S	Hydric S	oil Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6)
Femarks: HYDROLOG Wetland Hyd Surfa High	Mucky Peat or Peat (Layer: (if observed) Ches): drology Indicators: cators (minimum of or ace Water (A1) Water Table (A2)	(S3) (LRR F	ed; check all that	<i>apply)</i> salt Crust (quatic Fat	(B11) una (B13)	S	Hydric S	oil Present? Yes No _X Fors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Mucky Peat or Peat (Layer: (if observed) Ches): drology Indicators: cators (minimum of or ace Water (A1) Water Table (A2) ration (A3)	(S3) (LRR F	ed; check all that	<i>apply)</i> alt Crust (quatic Fat	(B11) una (B13) Sulfide Oc	S dor (C1)	Hydric S	oil Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Mucky Peat or Peat (Layer: (if observed) ches): GY drology Indicators: cators (minimum of or ace Water (A1) Water Table (A2) ration (A3) er Marks (B1)	(S3) (LRR F	ed; check all that	<i>apply)</i> salt Crust (quatic Fau lydrogen S	(B11) una (B13) Sulfide Oc n Water T) dor (C1) able (C2)	Hydric S	oil Present? Yes No _X Fors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	Mucky Peat or Peat (Layer: (if observed) Ches): Gradology Indicators: Cators (minimum of or ace Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2)	(S3) (LRR F	ed; check all that	apply) salt Crust (quatic Faulydrogen Sory-Seasor	(B11) una (B13) Sulfide Oc n Water T	S dor (C1)	Hydric S	oil Present? Yes No _X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift	Mucky Peat or Peat (Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of or ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3)	(S3) (LRR F	ed; check all that	apply) salt Crust (quatic Faulydrogen S Pry-Seasor exidized Rhi	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled)) dor (C1) Table (C2) on Living Roots (C3)	Hydric S	oil Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	Mucky Peat or Peat (Layer: (if observed) Ches): GY drology Indicators: cators (minimum of or ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	(S3) (LRR F	ed; check all that S A C ()	apply) salt Crust (quatic Faulydrogen Sory-Seasor exidized Rhi. where not	(B11) una (B13) Sulfide Oc n Water T zospheres t tilled) of Reduce	dor (C1) Table (C2) on Living Roots (C3)	Hydric S	oil Present? Yes No X Fors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I	Mucky Peat or Peat (Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of or ace Water (A1) Water Table (A2) ration (A3) Or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	ne is require	ed; check all that	apply) salt Crust (quatic Faulydrogen Sory-Season exidized Rhin where note of the control of th	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled) of Reduce Surface (on Living Roots (C3)	Hydric S	oil Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Peat (Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of or ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aeria	ne is require	ed; check all that	apply) salt Crust (quatic Faulydrogen Sory-Seasor exidized Rhi. where not	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled) of Reduce Surface (on Living Roots (C3)	Hydric S	oil Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	Mucky Peat or Peat (Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of or ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aeria er-Stained Leaves (B9)	ne is require	ed; check all that	apply) salt Crust (quatic Faulydrogen Sory-Season exidized Rhin where note of the control of th	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled) of Reduce Surface (on Living Roots (C3)	Hydric S	oil Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
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Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate Field Obser Surface Wat	Mucky Peat or Peat (Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of or ace Water (A1) Water Table (A2) ration (A3) Or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aeria car-Stained Leaves (B9) vations: care Present?	ne is require	ed; check all that A B C (F B7) Yes	apply) salt Crust (aquatic Far lydrogen S ry-Seasor rxidized Rhi where not resence of thin Muck other (Expl	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled) of Reduce Surface (lain in Re	dor (C1) Table (C2) on Living Roots (C3) ed Iron (C4) C7) marks) Depth (inches)	Hydric S	oil Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyde Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate Field Obser Surface Wat Water Table	Mucky Peat or Peat (Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of or ace Water (A1) Water Table (A2) ration (A3) Or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aeria car-Stained Leaves (B9) vations: care Present?	al Imagery (ed; check all that S A C (() F B7) Yes Yes Yes	apply) salt Crust (quatic Far lydrogen S ry-Seasor exidized Rhi where not resence c chin Muck other (Expl	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled) of Reduce Surface (lain in Re	dor (C1) Table (C2) on Living Roots (C3) and Iron (C4) C7) marks)	Hydric S	oil Present? Yes No X Fors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Determinat	tion Data Form	- Great Plains Region	n	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Transportation		State: WY	Sampling Point:	S-61
Investigator(s): R. Newton, D. Soucy		Section, T	ownship, Range: S2	T13N R67W
Landform (hillslope, terrace, etc.): depression	Local Relief (con	ncave, convex, none): co	oncave	Slope (%): <u>0-1</u>
Subregion (LRR): G - Western Great Plains	Lat22791	8.5193 Long:	743685.8075	Datum: WY E
Soil Map Unit Name: Urban land-Evanston complex, 0 to 6 pe	ercent slopes	NWI	Classification:	UPL
Are climatic/hydrologic conditions on the site typical for this time	e of year? Yes	X No (If no	o, explain in Remarks,)
Are Vegetation, Soil, or Hydrologysig	gnificantly disturbed? A	re "Normal Circumstances" p	resent? Yes	X No
Are Vegetation , Soil , or Hydrology na	turally problematic?	(If needed, expla	nin any answers in Rei	marks.)
SUMMARY OF FINDINGS - Attach site map showing sampli	ing point locations, tra	ansects, important features	, etc.	
Hydrophytic Vegetation Present? Yes X No				
Hydric Soil Present? Yes X No	Is the Sar	npled Area within a Wetland?	? Yes	X No
Wetland Hydrology Present? Yes X No			_	
Remarks:				
Depressional palustrine emergent wetland PEM-20.				
VEGETATION - Use scientific names of plants.		Dominance Test Workshee		
	ominant Indicator pecies? Status	Number of Dominant Specie		
1.		That Are OBL, FACW, or FA		1 (A)
2.		(excluding FAC-):		
3.		Total Number of Dominant		
4.		Species Across All Strata:		1 (B)
5				
Sapling/Shrub Stratum (Plot size: 15x15 ft) 1.	tal Cover	Percent of Dominant Specie That Are OBL, FACW, or FA		100% (A/B)
2.		Prevalence Index Worksho	et:	
3.		Total % Cover of:	<u> </u>	Multiply by:
4		OBL species	12 x 1 =	12
5		FACW species	75 x 2 =	150
		FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)		FACU species	0 x 4 =	0
1. Alopecurus pratensis 75		UPL species	$0 \times 5 =$	0
2. Eleocharis palustris 12	N OBL	Column Totals:	87 (A)	162 (B)
3		Hydrophytic Vegetation Inc	ce Index = B/A =	1.9
4 5.			for Hydrophytic Veget	ation
6.		X 2. Dominance		auon
7.		X 3. Prevalence		
8. 9.		4. Morphologic	– cal Adaptations¹ (Prov ı Remarks or on a sep	•
10.		Problematic H	lydrophytic Vegetation	(Explain)
,	tal Cover		jaroprijao rogotaao.	(=,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Woody Vine Stratum (Plot size: 30x30 ft)				
1.		¹ Indicators of hydric s	soil and wetland hydrold	ngy must be
2.		present, unless distur		ogy must be
0 =-	Total Cover		<u> </u>	
% Bare Ground in Herb Stratum 13 %		Hydrophytic Vegetat	ion Present?	X_YesNo
Remarks:				

	Matrix			Redox Fe	<u>ature</u> s				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-3	10 YR 3/1	100					Clay Loam		
3-5	10 YR 5/4	100					Clay Loam		
5-16	2.5 Y 6/2	95	7.5 YR 5/6	5	С	M	Clay		
¹ Type: C=Co	oncentration, D=Dep	oletion, RM=l	Reduced Matrix,	CS=Covere	ed or Co	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix	
Hydric Soil I	Indicators						Indicat	ors for Problematic Hydric Soils ³ :	
Histo	sol (A1)			Sandy	Gleyed I	Matrix (S4)		1 cm Muck (A9) (LRR I, J)	
	Epipedon (A2)		_		Redox (Coast Prairie Redox (A16) (LRR F, G, H)	
	(Histic (A3)		_	Strippe	ed Matrix	(S6)		Dark Surface (S7) (LRR G)	
Hydro	ogen Sulfide (A4)		_	 Loamy	Mucky I	Mineral (F1)		High Plains Depressions (F16)	
	fied Layers (A5) (LF	RR F)	_	 Loamy	Gleyed	Matrix (F2)		(LRR H outside of MLRA 72 & 73)	
	Muck (A9) (LRR F,	•	_	X Deplete	-			Reduced Vertic (F18)	
Deple	eted Below Dark Sur	rface (A11)	_	Redox	Dark Su	rface (F6)		Red Parent Material (TF2)	
Thick	Dark Surface (A12))	_	Deplete	ed Dark	Surface (F7)		Other (Explain in Remarks)	
Sand	y Mucky Mineral (S	1)	_	Redox	Depress	ions (F8)	3Indica	tors of hydrophylic vegetation and	
		eat (S2) (LRF	R G, H)	— High P	lains De _l	pressions (F16)		, , , ,	
2.5 ci	2.5 cm Mucky Peat or Peat (S2) (LRR G, H)						wetland hydrology must be present, unless		
	m Mucky Peat or Pea Mucky Peat or Peat		_	(MLR	A 72 & 73	3 of LRR H)	disturb	ed or problematic.	
5 cm	Mucky Peat or Pea	t (S3) (LRR I	_	(MLR	A 72 & 73	3 of LRR H)	disturb	ed or problematic.	
5 cm	-	t (S3) (LRR I	_	(MLR	A 72 & 73	3 of LRR H)	disturb	ed or problematic.	
5 cm Restrictive I Type:	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR I	_	(MLR	A 72 & 73	3 of LRR H)			
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR I	_	(MLR	A 72 & 73	3 of LRR H)		oil Present? Yes X No	
5 cm Restrictive I Type:	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR I	_	(MLR	A 72 & 73	B of LRR H)			
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR I	_	(MLR	A 72 & 73	3 of LRR H)			
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat Layer: (if observed) thes):	t (S3) (LRR I	_	(MLR	A 72 & 73	B of LRR H)			
Restrictive I Type: Depth (inc Remarks: HYDROLOG	Mucky Peat or Peat Layer: (if observed) Shes): Ty drology Indicators:	t (S3) (LRR I	F)		A 72 & 73	B of LRR H)			
Restrictive I Type: Depth (inc Remarks: HYDROLOG	Mucky Peat or Peat Layer: (if observed) thes):	t (S3) (LRR I	F)		A 72 & 73		Hydric Sc		
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	Mucky Peat or Peat Layer: (if observed) Ches): Y drology Indicators: cators (minimum of o	t (S3) (LRR I	ed; check all that	<i>apply)</i> alt Crust (E	311)	S	Hydric Sc	oil Present? Yes X No	
Femarks: HYDROLOG Wetland Hyd Surfa High	Mucky Peat or Peat Layer: (if observed) thes): drology Indicators: cators (minimum of observed) ace Water (A1) Water Table (A2)	t (S3) (LRR I	ed; check all that	<i>apply)</i> alt Crust (E quatic Fau	311) na (B13)	s	Hydric Sc	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)	
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Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Mucky Peat or Peat Layer: (if observed) Ches): Cy drology Indicators: cators (minimum of of other (A1) Water Table (A2) cation (A3) or Marks (B1)	t (S3) (LRR I	ed; check all that	<i>apply)</i> alt Crust (E quatic Fau	311) na (B13) ulfide Oc	S lor (C1)	Hydric Sc	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living	
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Mucky Peat or Peat Layer: (if observed) thes): drology Indicators: cators (minimum of cators (minimum of cators (minimum of cators (mainimum of	t (S3) (LRR I	ed; check all that S A H	<i>apply)</i> alt Crust (E quatic Fau ydrogen S rry-Season	311) na (B13) ulfide Oc Water T	S lor (C1)	Hydric Sc Secondary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)	
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Festrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund	Mucky Peat or Peat Layer: (if observed) Ches): Cy drology Indicators: Cators (minimum of observed) Water Table (A2) Cation (A3) Cators (B1) Cators (B2) Cators (B3) Cators (B4) Cators (B5) Cators	t (S3) (LRR I	ed; check all that A B O (v	apply) alt Crust (E quatic Fau lydrogen S rry-Season xidized Rhiz where not resence of	311) Ina (B13) Ilfide Oc Water T Iospheres tilled) F Reduce Surface (Solution (C1) Sable (C2) Son Living Roots (C3) d Iron (C4) C7)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C5)	
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Festrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund	Mucky Peat or Peat Layer: (if observed) Ches): Cy drology Indicators: Cators (minimum of observed) Water Table (A2) Cation (A3) Cation (A3) Cation (A3) Cation (B4) Cation (B4) Cation (Crust (B4) Cation Visible on Aer	t (S3) (LRR I	ed; check all that A B O (v	apply) alt Crust (Equatic Fau ydrogen Sory-Season xidized Rhiz where not resence of hin Muck S	311) Ina (B13) Ilfide Oc Water T Iospheres tilled) F Reduce Surface (Solution (C1) Sable (C2) Son Living Roots (C3) d Iron (C4) C7)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C6) Geomorphic Position (D2) FAC-Neutral Test (D5)	
Festrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate	Mucky Peat or Peat Layer: (if observed) Ches): GY drology Indicators: cators (minimum of observed) Action (A1) Water Table (A2) ration (A3) Art Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer ar-Stained Leaves (E	t (S3) (LRR I	ed; check all that A B O (v	apply) alt Crust (Equatic Fau ydrogen Sory-Season xidized Rhiz where not resence of hin Muck S	311) ulfide Oc Water T ospheres tilled) F Reduce Surface (ain in Re	Solution (C1) Sable (C2) Son Living Roots (C3) d Iron (C4) C7)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)	
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate Field Observ Surface Wate Water Table	Mucky Peat or Peat Layer: (if observed) Ches): Grading Indicators: Cators (minimum of of other of other of other of other of other of other other of other	rial Imagery (ed; check all that S A H O (v P T (B7) Yes Yes	apply) alt Crust (Equatic Fau ydrogen Sory-Season xidized Rhiz where not resence of hin Muck Sorther (Expla	311) Ina (B13) Ilifide Oc Water T ospheres tilled) F Reduce Surface (ain in Re	Solution (C1) Sable (C2) Son Living Roots (C3) d Iron (C4) C7) marks)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)	

Wetland	Determina	tion Da	ıta Form	ı - Gre	at Plains Reg	ion		
Project/Site: I-25/I-80 Interchange		City/	County: Che	yenne/L	aramie	Sampling Da	ate: 7/ 3	31/2019
Applicant/Owner: Wyoming Dept. of Tra	ansportation				State: WY	Sampling Po	int:	S-62
Investigator(s): R. Newton, D. Soucy					Section	n, Township, Range:	S2 T13N I	R67W
Landform (hillslope, terrace, etc.): minor s	slope	Loc	cal Relief <i>(co</i>	ncave, c	onvex, none):	none	Slope	(%): 0-3
Subregion (LRR): G - Western Great Pla	ins	Lat.	2279	36.5925	Long:	743684.4618	Datu	m: WY E
Soil Map Unit Name: <u>Urban land-Evanston o</u>	complex, 0 to 6 p	percent slop	es		N	IWI Classification:		JPL
Are climatic/hydrologic conditions on the site t	typical for this tir	ne of year?	Yes	X	No(/	lf no, explain in Rem	narks)	
Are Vegetation , Soil , or Hy	drology s	ignificantly	disturbed? A	re "Norm	al Circumstances	" present? Yes)	K No
Are Vegetation , Soil , or Hy	drology n	aturally pro	blematic?		(If needed, ex	plain any answers i	n Remarks.	<u> </u>
SUMMARY OF FINDINGS - Attach site map	showing samp	ling point	ocations, tr	ansects,	important featu	res, etc.		
Hydrophytic Vegetation Present? Yes	No X				-			
Hydric Soil Present? Yes	X No		Is the Sa	mpled Ar	ea within a Wetla	nd? Y	res N	No X
Wetland Hydrology Present? Yes	No X			•				
Remarks:	<u> </u>							
D : 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								
Paired upland point for PEM-20.								
VEGETATION - Use scientific names of pla		Dt	la dia akan	Domina	nce Test Works	hoot:		
<u>Tree Stratum</u> (Plot size: 30x30 ft)		Dominant Species?	Indicator Status		of Dominant Spe			
1.					OBL, FACW, or		0	(A)
2.				(excludi	ng FAC-) :			
3.				Total N	ımber of Dominaı	nt		
4.					Across All Strata		3	(B)
5.								
Sapling/Shrub Stratum (Plot size: 15x ²	0 = To	otal Cover			of Dominant Spe e OBL, FACW, or		0%	(A/B)
2.				Prevale	nce Index Work	sheet:		
3.					Total % Cover	of:	Multip	oly by:
4.				OBL	species	0 2	x 1 =	0
5.				FACW	species	0 :	x 2 =	0
	0 = To	otal Cover		FAC	species	0 :	x 3 =	0
Herb Stratum (Plot size: 5x5 ft)				FACU	species	60	x 4 =	240
1. Bromus inermis	20	Υ	UPL	UPL	species	20 ×	κ 5 =	100
2. Achillea millefolium	25	Υ	FACU	Column	Totals:	80	(A)	340 (B)
3. Melilotus officinalis	15	N	FACU			lence Index = B/A =	4.3	3
4. Poa pratensis		Y	FACU	Hydrop	hytic Vegetation			
5						est for Hydrophytic \	/egetation	
6						nce Test is >50%.		
7						nce Index is <3.01	(D	
8					•	ogical Adaptations¹ a in Remarks or on	•	•
9					. •			•
lo	80 = To	otal Cover			Problemation	c Hydrophytic Vege	tation (Expi	ain)
Woody Vine Stratum (Plot size: 30x30		Jiai Covei						
4 (Flot size: 30x30)				1			
2					•	ric soil and wetland hy sturbed or problemati		st be
	0 =	Total Cove	<u> </u>		present, unless un	starbed or problemati		
% Bare Ground in Herb Stratum 2		. 5.6. 5070	•		Hydrophytic Vege	etation Present?	Ye	s X No
Remarks:								

(inches)	Matrix			Redox Fea	atures			
,	Color (moist)	% C	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 2.5	10 YR 4/2	100				·	Clay Loam	
2.5 - 9	2.5 Y 6/3	90	7.5 YR 4/6	10	С	M	Clay	
9 - 16	10 YR 7/1	97	7.5 YR 4/6	3	С	M	Sandy Clay	
						·		
¹ Type: C=Co	oncentration, D=Depl	etion, RM=Re	duced Matrix, (CS=Covere	ed or Coa	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil I	<u>_</u>		<u> </u>					ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandy	Gleyed N	лаtrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		_		d Matrix	,		Dark Surface (S7) (LRR G)
	gen Sulfide (A4)		_			Mineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LR	RF)	_		•	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, G	,	_	X Deplete	-		1	Reduced Vertic (F18)
	ted Below Dark Surfa		_	Redox	Dark Sui	face (F6)		Red Parent Material (TF2)
Thick	Dark Surface (A12)	` '	_	Deplete	ed Dark S	Surface (F7)		Other (Explain in Remarks)
Sand	y Mucky Mineral (S1))	_	Redox	Depress	ions (F8)	3Indicat	ors of hydrophylic vegetation and
	n Mucky Peat or Pea		 €, H)			pressions (F16)		hydrology must be present, unless
5 cm	Mucky Peat or Peat	(S3) (LRR F)	_	(MLR	A 72 & 73	of LRR H)	disturb	ed or problematic.
Postrictive I	aver: (if channed)							
	.ayer: (if observed)							
Type: Depth <i>(inc</i>	hes):						Uvdrio Co	11. P. 10
Dopui (mo								
							l lydilo od	il Present? Yes X No
Remarks:							I i i junio de	II Present? Yes X No
Remarks:							I IIyano oo	II Present? Yes X No
	Y						iiyano oo	II Present? Yes X No
HYDROLOG	Y Irology Indicators:						nyune co	II Present? Yes X No
HYDROLOG Wetland Hyd		ne is required,	check all that	apply)		s		ors (minimum of two required)
HYDROLOG Wetland Hyo Primary Indic	Irology Indicators:	ne is required,		apply) alt Crust (E	311)	S		
HYDROLOG Wetland Hyo Primary Indio	Irology Indicators: ators (minimum of or	ne is required	S		,			ors (minimum of two required)
HYDROLOG Wetland Hyd Primary Indic Surfa High	Irology Indicators: ators (minimum of or ce Water (A1)	ne is required,	S	alt Crust (E	na (B13)			ors (minimum of two required) Surface Soil Cracks (B6)
HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Irology Indicators: ators (minimum of or ce Water (A1) Water Table (A2)	ne is required,	S A H	alt Crust (E quatic Fau	na (B13) ulfide Od	or (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Irology Indicators: ators (minimum of or ce Water (A1) Water Table (A2) ation (A3)	ne is required	S A H D	alt Crust (E quatic Faul lydrogen St ry-Season	na (B13) ulfide Od Water Ta	or (C1)	econdary Indicato	ors <i>(minimum of two required)</i> Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin	Irology Indicators: ators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	ne is required,	S H D	alt Crust (E quatic Faul lydrogen St ry-Season	na (B13) ulfide Od Water Ta ospheres	or (C1) able (C2)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I	Irology Indicators: ators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2)	ne is required,	S H D 0 (v	alt Crust (E quatic Faul lydrogen Su ry-Season xidized Rhizo	na (B13) ulfide Od Water Ta ospheres	or (C1) able (C2) on Living Roots (C3)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I	Irology Indicators: ators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)	ne is required	S. A D O. (v	alt Crust (E quatic Faul lydrogen Su rry-Season xidized Rhizo where not t	na (B13) ulfide Od Water Ta ospheres tilled) Reduced	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Wetland Hyd Primary Indice Surfa High Satur Wate Sedin Drift [Algal Iron [Irology Indicators: ators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)		S H O (v T	alt Crust (E quatic Faul lydrogen St rry-Season xidized Rhize where not the	na (B13) ulfide Od Water Tabespheres tilled) Reduced urface (0	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8)
HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift [Algal Iron [Inund	Irology Indicators: ators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	al Imagery (B	S H O (v T	alt Crust (E quatic Faul lydrogen St rry-Season xidized Rhize where not the resence of hin Muck S	na (B13) ulfide Od Water Tabespheres tilled) Reduced urface (0	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I	Irology Indicators: ators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria r-Stained Leaves (B9)	al Imagery (B	S H O (v T	alt Crust (E quatic Faul lydrogen St rry-Season xidized Rhize where not the resence of hin Muck S	na (B13) ulfide Od Water Tabespheres tilled) Reduced urface (0	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5)
HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate	Irology Indicators: ators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria r-Stained Leaves (B9) Vations:	al Imagery (B	S H O (v T	alt Crust (E quatic Faul lydrogen St rry-Season xidized Rhize where not the resence of hin Muck S	na (B13) ulfide Od Water Ti ospheres tilled) Reduced urface ((in in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate Field Observ	Irology Indicators: ators (minimum of or ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria r-Stained Leaves (B5) rations: er Present?	al Imagery (B	S. — A. — H. — D. — (v. — P. — TI — O. — O	alt Crust (E quatic Faul lydrogen St lyry-Season xidized Rhize where not the resence of hin Muck So other (Explate	na (B13) ulfide Od Water Ti ospheres cilled) Reduced urface ((in in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5)

Wetland Determination	n Data Form	- Great Plains Regi	on	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Transportation		State: WY	Sampling Point:	S-63
Investigator(s): R. Newton, D. Soucy		Section	Township, Range: S2	T13N R67W
Landform (hillslope, terrace, etc.) : plain	Local Relief (co	ncave, convex, none):	none	Slope (%): 0
Subregion (LRR): G - Western Great Plains	Lat. 2277	24.382 Long:	743533.9523	Datum: WY E
Soil Map Unit Name: <u>Urban land-Evanston complex, 0 to 6 perc</u>	ent slopes	N\	WI Classification:	UPL
Are climatic/hydrologic conditions on the site typical for this time of	of year? Yes	X No(If	no, explain in Remarks)
Are Vegetation, Soil, or Hydrologysignif	icantly disturbed? A	e "Normal Circumstances"	present? Yes	X No
Are Vegetation , Soil , or Hydrology natur	ally problematic?	(If needed, exp	olain any answers in Re	marks.)
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, tra	ansects, important featur	es, etc.	
Hydrophytic Vegetation Present? Yes X No		-		
Hydric Soil Present? Yes No X	Is the Sar	npled Area within a Wetlan	id? Yes	No X
Wetland Hydrology Present? Yes No X		'	_	
Remarks:				
Area with dominant hydrophytic vegetation but lacking hydric soils	and wetland hydrol	ogy.		
VEGETATION - Use scientific names of plants.		<u> </u>		
Absolute Domi Tree Stratum (Plot size: 30x30 ft) % Cover Spec		Dominance Test Worksh Number of Dominant Spe		
1	ics: Otatus	That Are OBL, FACW, or		1 (A)
		(excluding FAC-):		(A)
3.		Total Number of Dominan	t	
4.		Species Across All Strata:		1 (B)
5.				
	Cover	Percent of Dominant Spec That Are OBL, FACW, or		100% (A/B)
2.		Prevalence Index Works	heet:	
3		Total % Cover of	of: 1	Multiply by:
4		OBL species	0 x 1 =	0
5		FACW species	100 x 2 =	
0 = Total	Cover	FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)	(FAC)A/	FACU species	0 x 4 = 0	0
1. Juncus balticus 100 Y	FACW_	UPL species Column Totals:		
2. 3.			100 (A) ence Index = B/A =	200 (B) 2.0
<u></u>		Hydrophytic Vegetation		2.0
5.			st for Hydrophytic Vege	tation
6.			ce Test is >50%.	
7.		X 3. Prevalen	ce Index is <3.01	
8. 9.			gical Adaptations¹ (Prov in Remarks or on a sep	
10.		Problematic	Hydrophytic Vegetation	ı (Explain)
100 = Total	Cover		, , , ,	` ' '
Woody Vine Stratum (Plot size: 30x30 ft)				
1.		¹ Indicators of hydr	ic soil and wetland hydrolo	ngy must he
2.			turbed or problematic.	201 111431 30
0 = Tot	al Cover			
% Bare Ground in Herb Stratum 0 %		Hydrophytic Veget	tation Present?	X YesNo
Remarks:				

(inches) Color (inches) 0-8 10 YF 8-18 10 YF 10	R 3/2 100 R 5/3 98 n, D=Depletion, RI (A2)) e (A4) s (A5) (LRR F)	Color (moist) 7.5 YR 5/8 M=Reduced Matrix, C		M	Indicators fo	Remarks The Lining, M=Matrix For Problematic Hydric Soils ³ :
1 Type: C=Concentration Hydric Soil Indicators Histosol (A1) Histic Epipedon Black Histic (A3) Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	n, D=Depletion, RI (A2)) e (A4) s (A5) (LRR F)		S=Covered or	Coated Sand Grains	Sand 2Location: PL=Port	
¹ Type: C=Concentratio Hydric Soil Indicators Histosol (A1) Histic Epipedon Black Histic (A3) Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	(A2)) e (A4) s (A5) (LRR F)		S=Covered or	Coated Sand Grains	² Location: PL=Por	
Hydric Soil Indicators Histosol (A1) Histic Epipedon Black Histic (A3) Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	(A2)) e (A4) s (A5) (LRR F)	M=Reduced Matrix, C	Sandy Gley		Indicators fo	
Hydric Soil Indicators Histosol (A1) Histic Epipedon Black Histic (A3) Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	(A2)) e (A4) s (A5) (LRR F)	M=Reduced Matrix, C	Sandy Gley		Indicators fo	
Hydric Soil Indicators Histosol (A1) Histic Epipedon Black Histic (A3) Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	(A2)) e (A4) s (A5) (LRR F)	M=Reduced Matrix, C	Sandy Gley		Indicators fo	
Hydric Soil Indicators Histosol (A1) Histic Epipedon Black Histic (A3) Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	(A2)) e (A4) s (A5) (LRR F)	M=Reduced Matrix, C	Sandy Gley		Indicators fo	
Hydric Soil Indicators Histosol (A1) Histic Epipedon Black Histic (A3) Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	(A2)) e (A4) s (A5) (LRR F)	M=Reduced Matrix, C	Sandy Gley		Indicators fo	
Hydric Soil Indicators Histosol (A1) Histic Epipedon Black Histic (A3) Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	(A2)) e (A4) s (A5) (LRR F)	M=Reduced Matrix, C	Sandy Gley		Indicators fo	
Hydric Soil Indicators Histosol (A1) Histic Epipedon Black Histic (A3) Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	(A2)) e (A4) s (A5) (LRR F)		Sandy Gley		Indicators fo	
Histosol (A1) Histic Epipedon Black Histic (A3 Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	e (A4) c (A5) (LRR F)	_ _ _		ed Matrix (S4)		
Histic Epipedon Black Histic (A3 Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	e (A4) c (A5) (LRR F)				1 cm	Muck (A9) (LRR I, J)
Black Histic (A3 Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	e (A4) c (A5) (LRR F)	_	_	x (S5)		et Prairie Redox (A16) (LRR F, G, H)
Hydrogen Sulfid Stratified Layers 1 cm Muck (A9) Depleted Below	e (A4) s (A5) (LRR F)	_	Stripped Ma	` '		Surface (S7) (LRR G)
Stratified Layers 1 cm Muck (A9) Depleted Below	(A5) (LRR F)		_ ``	ил (оо) ку Mineral (F1)		Plains Depressions (F16)
1 cm Muck (A9) Depleted Below	, , , , ,		_	ed Matrix (F2)		RR H outside of MLRA 72 & 73)
Depleted Below	(IRREGEN)	_	Depleted M		•	uced Vertic (F18)
			_ '	Surface (F6)		Parent Material (TF2)
THICK Dark Guit		<u> </u>	_	rk Surface (F7)		er (Explain in Remarks)
Sandy Mucky M	, ,		_ '	essions (F8)		,
	eat or Peat (S2) (I	RR G H)	_	Depressions (F16)		of hydrophylic vegetation and drology must be present, unless
	at or Peat (S3) (LR		_	& 73 of LRR H)	•	r problematic.
			(1	
Restrictive Layer: (if o	bserved)					
Type:						
Depth (inches):					Hydric Soil Pi	resent? Yes No X
Remarks:					•	
HYDROLOGY						
Wetland Hydrology In	dicators:					
Primary Indicators (min	imum of one is req	uired; check all that a	pply)	5	Secondary Indicators (r	minimum of two required)
Surface Water (A1)	Sa	It Crust (B11)		Sı	urface Soil Cracks (B6)
High Water Tab	le (A2)	Aq	uatic Fauna (E	13)	 Sp	parsley Vegetated Concave Surf. (B8)
Saturation (A3)	, ,	—— Hy	drogen Sulfide	Odor (C1)	Di	rainage Patterns (B10)
Water Marks (B	1)		y-Season Wat			xidized Rhizospheres on Living
Sediment Depos				res on Living Roots (C3	—— R	oots (C3) (where tilled)
Drift Deposits (E		(w	here not tilled)	Cı	rayfish Burrows (C8)
Algal Mat or Cru	,	Pro	esence of Red	uced Iron (C4)	 Sa	aturation Visible on Aerial Imagery (C9
Iron Deposits (E		—— Th	in Muck Surfa	e (C7)		seomorphic Position (D2)
	le on Aerial Image		her (Explain in		X FA	AC-Neutral Test (D5)
Water-Stained L	_		` '	,		rost-Heave Hummocks (D7) (LRR F)
Field Observations:						
Surface Water Present	?	Yes	No X	Depth (inches)		Wetland Hydrology
Water Table Present?		Yes	No X	Depth (inches)		Present?
Saturation Present? (in	cludes capillarv frii		No X	Depth (inches)		Yes X No

Wetland	Determi	nation Da	ata Forr	n - Gre	at Plains Reç	gion		
Project/Site: I-25/I-80 Interchange		City	/County: Ch	eyenne/L	aramie	Sampling Da	ate: 7/31	/2019
Applicant/Owner: Wyoming Dept. of Tra	ansportation				State: WY	Sampling Po	oint: S	-64
Investigator(s): R. Newton, D. Soucy					Sectio	n, Township, Range	: S2 T13N R6	57W
Landform (hillslope, terrace, etc.): depres	sion	Lo	cal Relief <i>(c</i>	oncave, c	onvex, none):	concave	Slope (%	6): <u>0-1</u>
Subregion (LRR): G - Western Great Pla	ins	Lat	. 226	871.8601	Long:	743110.1468	Datum:	: WY E
Soil Map Unit Name: <u>Urban land-Evanston o</u>	complex, 0 to	6 percent slo	pes		!	NWI Classification:	UP	'L
Are climatic/hydrologic conditions on the site t	typical for this	s time of year?	? Ye	s X	No((If no, explain in Rer	narks)	
Are Vegetation , Soil , or Hy	drology	significantly	disturbed?	Are "Norm	al Circumstance	s" present? Yes	Χ	No
Are Vegetation , Soil , or Hy	drology	naturally pro	oblematic?		(If needed, e	xplain any answers	in Remarks.)	
SUMMARY OF FINDINGS - Attach site map		_		transects.	important featu	ıres. etc.	,	
	X No	1 31 -						
'	X No	_	Is the S	ampled Ar	ea within a Wetla	and?	Yes X No	1
·	X No	_	10 110 01	ampioa 7 ii	ca within a work	and:	<u> </u>	
Wetland Hydrology Present? Yes	<u> </u>	_						
Remarks:								
Depressional palustrine emergent wetland PE		ff-ramp island	•					
VEGETATION - Use scientific names of pla	nts.			-				
<u>Tree Stratum</u> (Plot size: 30x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status		ance Test Works of Dominant Sp			
1 (Plot size. 30x30 it	70 Cover	Species?	Status		e OBL, FACW, o		1	(4)
2					ing FAC-):	117.0.	- '	(A)
3.				T.A.I.NI		4		
4.					umber of Domina Across All Strat		1	(B)
5.				Орослос	77101000711101101	u.		
Sapling/Shrub Stratum (Plot size: 15x1	0 = 15 ft)	Total Cover			of Dominant Spee OBL, FACW, o		100%	(A/B)
2.				Prevale	ence Index Work	sheet:		
3.					Total % Cover	of:	Multiply	y by:
4				OBL	species	0	x 1 =	0
5				FACW	species			66
	0 =	= Total Cover		FAC	species	12	x 3 = 3	36
Herb Stratum (Plot size: 5x5 ft)				FACU	•			0
1. Hordeum jubatum	18	N	FACW	UPL	species	5		25
2. Bromus inermis	5	N	UPL	Column	Totals:	100	(A) 2	(B)
3. <u>Iva axillaris</u>	12	N	FAC			alence Index = B/A =	= 2.3	
4. Distichlis spicata	65	<u> </u>	FACW	Hydrop	hytic Vegetation			
5						est for Hydrophytic	Vegetation	
6						nce Test is >50%.		
7						nce Index is <3.01	(D.	
8					•	logical Adaptations¹ ta in Remarks or on		
9								
0	400	Total O			Problemat	ic Hydrophytic Vege	tation (Explair	n)
Woody Vine Stratum (Plot size: 30x30		= Total Cover						
1	··· /				1 Indiantary Cl	lain nail earl U U.	udral	ha
2					•	dric soil and wetland histurbed or problemat		ne
	0	= Total Cov	 er	-	present, anness u	.starbed or problemat		
% Bare Ground in Herb Stratum 0		. 3.01 000	- .		Hydrophytic Veg	etation Present?	XYes	No
Remarks:								

	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10 YR 2/2	100					Clay Loam	
6-8	10 YR 6/3	100					Sand	
8-14	10 YR 2/1	97	7.5 YR 4/6	3	С	M	Clay	
¹ Type: C=Co	oncentration, D=Dep	oletion, RM	=Reduced Matrix,	CS=Cove	ered or Coa	ated Sand Grains.	² Location: PL=	=Pore Lining, M=Matrix
Hydric Soil I			<u> </u>					ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sand	y Gleyed N	Matrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		y Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	(Histic (A3)		_		oed Matrix	•		Dark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)		_	 Loam	y Mucky N	Mineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LF	RR F)	_			Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	•	_		eted Matrix	` ,		Reduced Vertic (F18)
Deple	eted Below Dark Su	rface (A11)	_	X Redo	x Dark Sui	rface (F6)		Red Parent Material (TF2)
Thick	Dark Surface (A12)	_	 Deple	eted Dark S	Surface (F7)		Other (Explain in Remarks)
Sand	y Mucky Mineral (S	1)	_	Redo	x Depress	ions (F8)	3Indica	tors of hydrophylic vegetation and
2.5 cı	m Mucky Peat or Pe	eat (S2) (LF	RR G, H)	— High	Plains Dep	oressions (F16)		d hydrology must be present, unless
				DA 70 0 70	-f10011/	disturb	ed or problematic.	
5 cm	Mucky Peat or Pea	t (S3) (LRR	R F)	(IVIL	.RA 72 & 73	S OT LKK H)		
	-		R F) 	(IVIL	.KA /2 & /3	ot LKK H)		
Restrictive I	Mucky Peat or Pea Layer: (if observed)		(F) -	(ML	.KA /2 & /3	S OT LKK H)		
	Layer: (if observed)			(ML	.KA /2 & /3	S OT LKK H)	Hydric Sc	oil Present? Yes X No
Restrictive I Type: Depth (inc	Layer: (if observed)		R F) 	(ML	.KA 72 & 73	S OT LKK H)	Hydric Sc	bil Present? Yes X No
Restrictive L	Layer: (if observed)		R F)	(ML	.KA /2 & /3	S OT LKK H)	Hydric Sc	oil Present? Yes X No
Restrictive I Type: Depth (inc Remarks:	Layer: (if observed)		R F)	(ML	.KA /2 & /3	S OT LKK H)	Hydric Sc	oil Present? Yes X No
Restrictive I Type: Depth (inc Remarks:	Layer: (if observed)		RF)	(ML	.KA 72 & 73	S OT LKK H)	Hydric Sc	oil Present? Yes X No
Restrictive I Type: Depth (inc) Remarks: HYDROLOG	Layer: (if observed) ches):				.KA 72 & 73			
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	ches): Sy drology Indicators: cators (minimum of cators)		ired; check all that	apply)				ors (minimum of two required)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic	ches): GY drology Indicators: cators (minimum of other cators) acce Water (A1)		ired; check all that	apply) Salt Crust	(B11)	S		ors (minimum of two required) Surface Soil Cracks (B6)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	ches): drology Indicators: cators (minimum of once Water (A1) Water Table (A2)		ired; check all that	apply) Salt Crust Aquatic Fa	(B11) nuna (B13)	S		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	ches): drology Indicators: cators (minimum of once Water (A1) Water Table (A2) ration (A3)		ired; check all that	apply) Salt Crust Aquatic Fa	(B11) nuna (B13) Sulfide Od	Solor (C1)		ors (minimum of two required) Surface Soil Cracks (B6)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	ches): GY drology Indicators: cators (minimum of other (A1)) Water Table (A2) ration (A3) or Marks (B1)		ired; check all that	apply) Salt Crust Aquatic Fa	(B11) una (B13) Sulfide Od n Water Ta	lor (C1)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	ches): drology Indicators: cators (minimum of ace Water (A1) Water Table (A2) ration (A3) ar Marks (B1) ment Deposits (B2)		ired; check all that	apply) Salt Crust Aquatic Fa Hydrogen Ory-Seaso	(B11) nuna (B13) Sulfide Od n Water Ti	Solor (C1)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I	ches): drology Indicators: cators (minimum of of other): water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3)		ired; check all that	apply) Salt Crust Aquatic Fa Hydrogen Ory-Seaso Oxidized Rh	(B11) tuna (B13) Sulfide Od n Water Ti izospheres	Solor (C1) Sable (C2) on Living Roots (C3)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	ches): GY drology Indicators: cators (minimum of other (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)		ired; check all that	apply) Salt Crust Aquatic Fa Hydrogen Ory-Seaso Oxidized Rh where no	(B11) suna (B13) Sulfide Od n Water Taizospheres t tilled) of Reduced	lor (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I	ches): Carrier (if observed) Carrier (if ob	: one is requ	ired; check all that	apply) Salt Crust Aquatic Fa Hydrogen Ory-Seaso Oxidized Rh where no Presence of	(B11) Sulfide Od In Water Ti izospheres t tilled) of Reduced Surface ((Solor (C1) Sable (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund	ches): GY drology Indicators: cators (minimum of other (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	one is requ	ired; check all that	apply) Salt Crust Aquatic Fa Hydrogen Ory-Seaso Oxidized Rh where no Presence of	(B11) suna (B13) Sulfide Od n Water Taizospheres t tilled) of Reduced	Solor (C1) Sable (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate	ches): drology Indicators: cators (minimum of other): water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aei r-Stained Leaves (E	one is requ	ired; check all that	apply) Salt Crust Aquatic Fa Hydrogen Ory-Seaso Oxidized Rh where no Presence of	(B11) Sulfide Od In Water Ti izospheres t tilled) of Reduced Surface ((Solor (C1) Sable (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate	Adrology Indicators: cators (minimum of other (A1) Water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aerer-Stained Leaves (E	one is requ	ired; check all that	apply) Salt Crust Aquatic Fa Hydrogen Ory-Seaso Oxidized Rh where no Presence of Thin Muck Other (Exp	(B11) Juna (B13) Sulfide Od In Water Taizospheres It tilled) Of Reduced Surface (Colain in Rer	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate Field Observ Surface Wate	Layer: (if observed) ches): drology Indicators: cators (minimum of observed) water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer or-Stained Leaves (Evations: er Present?	one is requ	ired; check all that	apply) Salt Crust Aquatic Fa Hydrogen Ory-Seaso Oxidized Rh where no Presence of Thin Muck Other (Exp	(B11) Sulfide Od in Water Ti izospheres t tilled) of Reduced Surface (Colain in Rer	Solor (C1) Sable (C2) Son Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inund Wate Field Observ Surface Wate Water Table	Layer: (if observed) ches): drology Indicators: cators (minimum of observed) water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer or-Stained Leaves (Evations: er Present?	inal Imagery	ired; check all that S A B C (() B C (B7) Yes Yes Yes	apply) Salt Crust Aquatic Fa Hydrogen Dry-Seaso Dxidized Rh where no Presence of Thin Muck Dther (Exp	(B11) Juna (B13) Sulfide Od In Water Taizospheres It tilled) Of Reduced Surface (Colain in Rer	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	econdary Indicate	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology

Wetland [Determinatio	on Data	Form - Gre	at Plains Reg	ion	
Project/Site: I-25/I-80 Interchange		City/Cour	nty: Cheyenne/L	aramie	Sampling Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Tra	nsportation	•		State: WY	Sampling Point:	S-65
Investigator(s): R. Newton, D. Soucy				Section	n, Township, Range: S a	2 T13N R67W
Landform (hillslope, terrace, etc.): minor sl	lope	Local R	elief (concave, c	onvex, none):	none	Slope (%): 0-2
Subregion (LRR): G - Western Great Plair	ns	Lat.	226875.5449	Long:	743102.7482	Datum: WY E
Soil Map Unit Name: Urban land-Evanston co	omplex, 0 to 6 perc	ent slopes		<u> </u>	IWI Classification:	UPL
Are climatic/hydrologic conditions on the site ty	pical for this time	of year?	Yes X	No (If no, explain in Reman	ks)
Are Vegetation , Soil , or Hyd	Irology signi	ficantly distu	rbed? Are "Norm	al Circumstances	s" present? Yes	X No
Are Vegetation , Soil , or Hyd	rology natu	rally problem	atic?	(If needed. e)	xplain any answers in F	Remarks.)
SUMMARY OF FINDINGS - Attach site map		• .		•		,
Hydrophytic Vegetation Present? Yes	No X	, po	,	, por tarre route		
Hydric Soil Present? Yes		le	the Sampled Ar	ea within a Wetla	ınd? Yes	No X
<u> </u>		13	s trie Garripied Ai	ea willill a vvella	iliu: 165	NOX
Wetland Hydrology Present? Yes	No_X					
Remarks:						
Paired upland point for PEM-21.						
VEGETATION - Use scientific names of plan	its.		1			
Tree Stratum (Plot size: 30x30 ft)				ance Test Works r of Dominant Spe		
Tree Stratum (Plot size: 30x30 ft)	% Cover Spec	cies? Sta		e OBL, FACW, or		1 (A)
2				ing FAC-):		1 (A)
3.					4	
4.				umber of Domina Across All Strata		2 (B)
5.			<u> </u>	, , , , , , , , , , , , , , , , , , ,		
Sapling/Shrub Stratum (Plot size: 15x1:	0 = Total 5 ft)	Cover		t of Dominant Spe e OBL, FACW, or		50% (A/B)
1.	,			, ,	_	(,,,,,
2.			Prevale	ence Index Work	sheet:	
3.				Total % Cover	of:	Multiply by:
4.			OBL	species	0 x 1	= 0
5.			FACW	species	45 x 2	= 90
	0 = Total	Cover	FAC	species	0 x 3	= 0
Herb Stratum (Plot size: 5x5 ft)			FACU	species	0 x 4	= 0
Bromus inermis	50	Y U	IPL UPL	species	50 x 5	= 250
2. Hordeum jubatum	30	Y FA	Column	Totals:	95 (A) 340 (B)
3. Distichlis spicata	15 N	N FA	CW	Preva	lence Index = B/A =	3.6
4			Hydrop	hytic Vegetation	Indicators:	
5				1. Rapid To	est for Hydrophytic Veg	etation
6					nce Test is >50%.	
7					nce Index is <3.01	
8				•	ogical Adaptations¹ (Pr	•
9				porting dat	a in Remarks or on a s	eparate sneet)
0				Problemati	c Hydrophytic Vegetati	on (Explain)
	95 = Total	Cover				
Woody Vine Stratum (Plot size: 30x30 ft	<u>(</u>					
1				¹ Indicators of hyd	ric soil and wetland hydro	ology must be
2				present, unless di	sturbed or problematic.	
		tal Cover				
% Bare Ground in Herb Stratum 5	%			Hydrophytic Vege	etation Present?	Yes X No
Remarks:				·		

S-65

	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	10 YR 3/2	100					Clay Loam	
8-16	10 YR 5/2	96	5 YR 5/8	4	С	M	Sand	
¹ Type: C=Co	oncentration, D=Dep	oletion RM:	Reduced Matrix	CS=Cove	red or Co	ated Sand Grains	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil								ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandy	Gleved M	Matrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		•		Redox (Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		•		ed Matrix	,		
	ogen Sulfide (A4)		•			Mineral (F1)		Dark Surface (S7) (LRR G) High Plains Depressions (F16)
	ified Layers (A5) (LF	OD E\				, ,		
	. , ,	•			-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,				ted Matrix	` '		Reduced Vertic (F18)
	eted Below Dark Sur	` ,				rface (F6)		Red Parent Material (TF2)
	Dark Surface (A12)	,				Surface (F7)		Other (Explain in Remarks)
		•	BC U)			sions (F8)		ors of hydrophylic vegetation and
Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)				nign F	riains Dep	pressions (F16)		d hydrology must be present, unless
	-	+ (C2) /I DD	E\	/8/11	A 72 0 72	of LDD II/	uistui b	ed of problematic.
	Mucky Peat or Pea	t (S3) (LRR	F)	(MLI	RA 72 & 73	3 of LRR H)	uisturb	ed or problematic.
5 cm	-		F)	(MLI	RA 72 & 73	3 of LRR H)	uistui v	ed or problematic.
5 cm	Mucky Peat or Pea		F)	(MLI	RA 72 & 73	3 of LRR H)	uisturb	ed or problematic.
5 cm	Mucky Peat or Pea		F)	(MLI	RA 72 & 73	3 of LRR H)		vil Present? Yes X No
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Pea		F)	(MLI	RA 72 & 73	3 of LRR H)		
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Pea		F)	(MLI	RA 72 & 73	3 of LRR H)		
5 cm Restrictive I Type: Depth (incompress) Remarks:	Mucky Peat or Pea		F)	(MLI	RA 72 & 73	3 of LRR H)		
5 cm Restrictive I Type: Depth (inc) Remarks:	Mucky Peat or Pea Layer: (if observed) ches):		F)	(MLI	RA 72 & 73	3 of LRR H)		
Restrictive I Type: Depth (inco Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Pea Layer: (if observed) ches): Y drology Indicators:	:			RA 72 & 73		Hydric So	il Present? Yes X No
Type: Depth (incomplete Primary Indicate) 5 cm Restrictive I Type: Depth (incomplete Primary Indicate)	Mucky Peat or Pea Layer: (if observed) ches): GY drology Indicators: cators (minimum of company)	:	red; check all tha	at apply)			Hydric So	ors (minimum of two required)
Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic. Surfa	Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of o	:	red; check all tha	at apply) Salt Crust (B11)	S	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6)
Femarks: HYDROLOG Wetland Hyd Surfa High	Mucky Peat or Pear Layer: (if observed) ches): drology Indicators: cators (minimum of observed) water (A1) Water Table (A2)	:	red; check all tha	a <i>t apply)</i> Salt Crust (Aquatic Fat	B11) una (B13)	S	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Mucky Peat or Pear Layer: (if observed) ches): drology Indicators: cators (minimum of object Water (A1) Water Table (A2) ration (A3)	:	red; check all tha	at apply) Salt Crust (Aquatic Fat Hydrogen S	B11) una (B13) Sulfide Od	S lor (C1)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Mucky Peat or Pear Layer: (if observed) Ches): GY drology Indicators: cators (minimum of of other (A1)) Water Table (A2) ration (A3) or Marks (B1)	:	red; check all tha	at apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor	B11) una (B13) Sulfide Od n Water T	Solor (C1) Sable (C2)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	Mucky Peat or Pear Layer: (if observed) ches): drology Indicators: cators (minimum of of once Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2)	:	red; check all tha	at apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Oxidized Rhiz	B11) una (B13) Sulfide Od n Water T zospheres	S lor (C1)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I	Mucky Peat or Pear Layer: (if observed) ches): drology Indicators: cators (minimum of observed) water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3)	:	red; check all tha	at apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz	B11) una (B13) Sulfide Od n Water T zospheres tilled)	Solor (C1) Sable (C2) on Living Roots (C3)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	Mucky Peat or Pear Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of of other other of other other of other other of other othe	:	red; check all the	at apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not	B11) una (B13) Sulfide Od n Water T zospheres tilled) f Reduce	Solor (C1) Table (C2) On Living Roots (C3) d Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I	Mucky Peat or Pea Layer: (if observed) Ches): GY drology Indicators: cators (minimum of observed) Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	: one is requii	red; check all tha	at apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence o Thin Muck	B11) una (B13) Sulfide Od n Water T zospheres tilled) f Reduce Surface (Solution (C1) Sable (C2) Son Living Roots (C3) Solution (C4) Solution (C4) Solution (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Festrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Pear Layer: (if observed) ches): drology Indicators: cators (minimum of observed) water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer	: one is requin	red; check all tha	at apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not	B11) una (B13) Sulfide Od n Water T zospheres tilled) f Reduce Surface (Solution (C1) Sable (C2) Son Living Roots (C3) Solution (C4) Solution (C4) Solution (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Pea Layer: (if observed) Ches): GY drology Indicators: cators (minimum of observed) Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	: one is requin	red; check all tha	at apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence o Thin Muck	B11) una (B13) Sulfide Od n Water T zospheres tilled) f Reduce Surface (Solution (C1) Sable (C2) Son Living Roots (C3) Solution (C4) Solution (C4) Solution (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Pear Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of observed) Water Table (A2) Cation (A3) Cation (A3) Cation (A3) Cation (B4) Cation (B4) Cation (Crust (B4) Cation Visible on Aer	: one is requin	red; check all tha	at apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence o Thin Muck	B11) una (B13) Sulfide Od n Water T zospheres tilled) f Reduce Surface (Solution (C1) Sable (C2) Son Living Roots (C3) Solution (C4) Solution (C4) Solution (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	Mucky Peat or Pear Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of of other of other of other of other of other of other other of other other of other othe	: one is requin	red; check all tha	at apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence o Thin Muck	B11) una (B13) Sulfide Od n Water T zospheres tilled) f Reduce Surface (f	Solution (C1) Sable (C2) Son Living Roots (C3) Solution (C4) Solution (C4) Solution (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5)
Festrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	Mucky Peat or Pea Layer: (if observed) Ches): Gradiology Indicators: Cators (minimum of observed) Water (A1) Water Table (A2) Gration (A3) Gradion (A3) Gradion (A3) Mat or Crust (B4) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer Gradions: G	: one is requin	red; check all tha	at apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence of Thin Muck Other (Expl	B11) una (B13) Sulfide Od n Water T zospheres tilled) f Reduce Surface (Gain in Red	Solution (C1) Fable (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Determination	n Data Form	- Great Plains Reg	ion	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	7/31/2019
Applicant/Owner: Wyoming Dept. of Transportation	, , <u></u>	State: WY	Sampling Point:	S-66
Investigator(s): R. Newton, D. Soucy		Section	, Township, Range: S2	T13N R67W
Landform (hillslope, terrace, etc.): hillslope	Local Relief (cor	ncave, convex, none):	concave	Slope (%): 0-4
Subregion (LRR): G - Western Great Plains	Lat. 22677	70.6918 Long:	742860.9136	Datum: WY E
Soil Map Unit Name: Urban land-Evanston complex, 0 to 6 percentage	ent slopes	N	WI Classification:	UPL
Are climatic/hydrologic conditions on the site typical for this time of	f year? Yes	X No(//	f no, explain in Remarks	;)
Are Vegetation , Soil , or Hydrology signif	icantly disturbed? A	e "Normal Circumstances	" present? Yes	X No
Are Vegetation , Soil , or Hydrology natur	ally problematic?	(If needed, ex	plain any answers in Re	marks.)
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, tra	ansects, important featur	es, etc.	
Hydrophytic Vegetation Present? Yes X No		•	- 	
Hydric Soil Present? Yes No X	Is the Sar	npled Area within a Wetlar	nd? Yes	No X
Wetland Hydrology Present? Yes No X		•	_	
Remarks:				
		-11-		
Area with dominant hydrophytic vegetation but lacking wetland hydronycline	arology and nydric so	OIIS.		
VEGETATION - Use scientific names of plants.		Daminanaa Taat Wadaal		
Absolute Domi Tree Stratum (Plot size: 30x30 ft) % Cover Spec		Dominance Test Worksl Number of Dominant Spe		
1.		That Are OBL, FACW, or		1 (A)
2.	<u> </u>	(excluding FAC-):		` ',
3.		Total Number of Dominar	nt	
4.		Species Across All Strata		1 (B)
5.				
Sapling/Shrub Stratum (Plot size: 15x15 ft) 1.	Cover	Percent of Dominant Spe That Are OBL, FACW, or		100% (A/B)
2.		Prevalence Index Works	heet:	
3		Total % Cover	of:	Multiply by:
4		OBL species	0 x 1 =	
5		FACW species	100 x 2 =	
0 = Total		FAC species	0 x 3 =	
Herb Stratum (Plot size: 5x5 ft) 1. Juncus balticus 100 Y		FACU species UPL species	$\frac{0}{0}$ x 4 = 0 x 5 =	0
	FACVV	Column Totals:		
2. 3.			100 (A) lence Index = B/A =	200 (B) 2.0
		Hydrophytic Vegetation		2.0
5.			est for Hydrophytic Vege	tation
6.	<u> </u>		ce Test is >50%.	
7.		X 3. Prevalen	ce Index is <3.01	
8. 9.			ogical Adaptations¹ (Prov a in Remarks or on a sep	
10.		Problemation	Hydrophytic Vegetation	n (Explain)
100 = Total	Cover			. , ,
Woody Vine Stratum (Plot size: 30x30 ft)				
1.		¹ Indicators of hydr	ric soil and wetland hydrolo	ogy must be
2.			turbed or problematic.	-6,
0 = Tot	al Cover			
% Bare Ground in Herb Stratum 0 %		Hydrophytic Vege	tation Present?	X YesNo
Remarks:				

SOIL

Depth	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	10 YR 3/2	100					Clay Loam	
8-18	10 YR 5/3	100					Sand	
				· <u></u>				
¹ Type: C=Ce	oncentration, D=Dep	letion. RM	l=Reduced Matri	c. CS=Cove	ered or Coate	ed Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil	<u>'</u>	,						ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sand	y Gleyed Ma	trix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)				y Redox (S5			Coast Prairie Redox (A16) (LRR F, G, H)
	(Histic (A3)				oed Matrix (S			Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)				ny Mucky Mir	,		High Plains Depressions (F16)
	ified Layers (A5) (LR	RF)			ny Gleyed Ma			(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F , 6				eted Matrix (I			Reduced Vertic (F18)
	eted Below Dark Sur		1		x Dark Surfa	•		Red Parent Material (TF2)
	Dark Surface (A12)		,		eted Dark Su	` '		Other (Explain in Remarks)
	ly Mucky Mineral (S1				x Depression	` ,		tors of hydrophylic vegetation and
	m Mucky Peat or Pe		RR G. H)		•	essions (F16)		d hydrology must be present, unless
	Mucky Peat or Peat				LRA 72 & 73 o			ed or problematic.
0 0111	,	() (
		()(_ ′					
Restrictive I	Layer: (if observed)	()(_ ′					
Restrictive I	Layer: (if observed)	()	_ ′				Hydric Sc	uil Present? Ves No X
Restrictive I Type: Depth (inc	Layer: (if observed)	()(Hydric Sc	oil Present? Yes No _X
Restrictive I	Layer: (if observed)	()(Hydric Sc	vil Present? Yes No X
Restrictive I Type: Depth (inc	Layer: (if observed)	() (Hydric Sc	oil Present? Yes No_X
Restrictive I Type: Depth (inc	Layer: (if observed)						Hydric Sc	oil Present? Yes No X
Restrictive I Type: Depth (inc.) Remarks:	Layer: (if observed)						Hydric Sc	oil Present? Yes No X
Restrictive I Type: Depth (inc) Remarks: HYDROLOG	Layer: (if observed)			at apply)		s		oil Present? Yes No X
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd	Layer: (if observed) ches): SY drology Indicators:			at apply) Salt Crust	(B11)	s		
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	Layer: (if observed) ches): GY drology Indicators: cators (minimum of o			Salt Crust	(B11) auna (B13)	S		ors (minimum of two required)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indid Surfa High	Layer: (if observed) Ches): GY drology Indicators: cators (minimum of o			Salt Crust Aquatic Fa	,			ors (<i>minimum of two required</i>) Surface Soil Cracks (B6)
Restrictive I Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary India Surfa High Satur	Ches): GY drology Indicators: cators (minimum of of ace Water (A1) Water Table (A2)			Salt Crust Aquatic Fa Hydrogen	auna (B13)	(C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	ches): Grade Water (A1) Water Table (A2) ration (A3)			Salt Crust Aquatic Fa Hydrogen Dry-Seaso	auna (B13) Sulfide Odor on Water Tab	(C1)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indid Surfa High Satur Wate Sedir	Ches): GY drology Indicators: cators (minimum of of of other (A1)) Water Table (A2) ration (A3) or Marks (B1)			Salt Crust Aquatic Fa Hydrogen Dry-Seaso	auna (B13) Sulfide Odor on Water Tab nizospheres on	(C1) de (C2)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
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Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	ches): drology Indicators: cators (minimum of of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3)			Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no	auna (B13) Sulfide Odor on Water Tab nizospheres on ot tilled)	(C1) lle (C2) Living Roots (C3) ron (C4)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indid Surfa High Satur Wate Sedir Drift I Algal Iron I	ches): GY drology Indicators: cators (minimum of	ne is requ	iired; check all th	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence Thin Muck	auna (B13) Sulfide Odor on Water Tab nizospheres on ot tilled) of Reduced I	(C1) le (C2) Living Roots (C3) ron (C4)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	ches): GY drology Indicators: cators (minimum of of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	ne is requ	iired; check all th	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence Thin Muck	auna (B13) Sulfide Odor on Water Tab nizospheres on ot tilled) of Reduced I	(C1) le (C2) Living Roots (C3) ron (C4)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	ches): drology Indicators: cators (minimum of of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aerier-Stained Leaves (B	ne is requ	iired; check all th	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence Thin Muck	auna (B13) Sulfide Odor on Water Tab nizospheres on ot tilled) of Reduced I	(C1) le (C2) Living Roots (C3) ron (C4)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	ches): GY drology Indicators: cators (minimum of	ne is requ	iired; check all th	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence Thin Muck Other (Exp	auna (B13) Sulfide Odor on Water Tab aizospheres on ot tilled) of Reduced I Surface (C7 blain in Rema	(C1) le (C2) Living Roots (C3) ron (C4)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indid Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate Field Obser Surface Wat	ches): GY drology Indicators: cators (minimum of of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aericar-Stained Leaves (B	ne is requ	y (B7)	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence Thin Muck Other (Exp	suna (B13) Sulfide Odor on Water Tab nizospheres on ot tilled) of Reduced I a Surface (C7 plain in Rema	(C1) ble (C2) Living Roots (C3) ron (C4) r) arks)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive I Type: Depth (ind Remarks: HYDROLOG Wetland Hyd Primary India Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate Field Obser Surface Wat Water Table	ches): GY drology Indicators: cators (minimum of of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aericar-Stained Leaves (B	ne is requ al Imager 9)	y (B7)	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence Thin Muck Other (Exp	suna (B13) Sulfide Odor on Water Tab nizospheres on ot tilled) of Reduced I Surface (C7 plain in Rema	(C1) ble (C2) Living Roots (C3) ron (C4) blacks) epth (inches)	econdary Indicato	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology

S-66

Sampling Point:

Wetland Determination	n Data Form	- Great Plains Regi	on	
Project/Site: I-25/I-80 Interchange	City/County: Chey	/enne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Transportation	, , <u></u>	State: WY	Sampling Point:	S-67
Investigator(s): R. Newton, D. Soucy		Section,	Township, Range: S1	1 T13N R67W
Landform (hillslope, terrace, etc.): depression	Local Relief (cor	ncave, convex, none):	concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	Lat. 22391	8.3768 Long:	742904.2519	Datum: WY E
Soil Map Unit Name: <u>Urban land-Merden complex, 0 to 3 percer</u>	nt slopes	NV	VI Classification:	PEMA/PEMC
Are climatic/hydrologic conditions on the site typical for this time of	of year? Yes	X No (If	no, explain in Remarks	s)
Are Vegetation, Soil, or Hydrologysignif	ficantly disturbed? Ar	e "Normal Circumstances"	present? Yes	X No
Are Vegetation , Soil , or Hydrology natur	ally problematic?	(If needed, exp	olain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, tra	nsects, important feature	es, etc.	
Hydrophytic Vegetation Present? Yes X No				
Hydric Soil Present? Yes X No	Is the San	npled Area within a Wetlan	d? Yes	X No
Wetland Hydrology Present? Yes X No			-	
Remarks:				
NWI-mapped palustrine emergent wetland PEM-22 in on/off-ramp	island			
VEGETATION - Use scientific names of plants.	loidita.			
Absolute Domi	inant Indicator	Dominance Test Worksh	eet·	
Tree Stratum (Plot size: 30x30 ft) % Cover Spec		Number of Dominant Spec		
1.		That Are OBL, FACW, or I	FAC:	1 (A)
2.		(excluding FAC-):		
3.		Total Number of Dominan	t	
4		Species Across All Strata:		1 (B)
5				
Sapling/Shrub Stratum (Plot size: 15x15 ft) 1.		Percent of Dominant Spec That Are OBL, FACW, or I		100% (A/B)
2.		Prevalence Index Works	heet:	
3.		Total % Cover o	of:	Multiply by:
4.		OBL species	18 x 1 =	18
5		FACW species	75 x 2 =	150
0 = Total	Cover	FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)		FACU species	0 x 4 =	
1. Schoenoplectus pungens 18 N		UPL species	0 x 5 =	
2. Hordeum jubatum 12 N		Column Totals:	93 (A)	168 (B)
3. Distichlis spicata 55			ence Index = B/A =	1.8
4. Juncus balticus 8 N	FACW_	Hydrophytic Vegetation		4-4:
5		X 2. Dominano	st for Hydrophytic Vege	etation
6		X 3. Prevalence		
8. ————————————————————————————————————			gical Adaptations¹ (Pro	vide sup-
9.		•	in Remarks or on a se	•
10.		Problematic	Hydrophytic Vegetatio	n (Explain)
93 = Total	Cover		, , , ,	, ,
Woody Vine Stratum (Plot size: 30x30 ft)				
1.		¹ Indicators of hydri	c soil and wetland hydrol	logy must be
2.		•	urbed or problematic.	
0 = Tot	tal Cover			
% Bare Ground in Herb Stratum 7 %		Hydrophytic Veget	ation Present?	X Yes No
			_	_
Remarks:				

-	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10 YR 3/2	100					Sandy Clay	20% road fill/gravels
4-16	10 YR 7/2	90	7.5 YR 5/6	10	С	M	Sand	
							-	-
¹ Type: C=Co	ncentration, D=Dep	oletion, RM	i=Reduced Matrix	, CS=Cove	red or Co	ated Sand Grains.	² Location: PL	=Pore Lining, M=Matrix
Hydric Soil Ir	ndicators						Indica	tors for Problematic Hydric Soils ³ :
Histos	sol (A1)			Sandy	y Gleyed I	Matrix (S4)		1 cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)			X Sandy	y Redox (S	S5)		Coast Prairie Redox (A16) (LRR F, G, H)
Black	Histic (A3)			Stripp	ed Matrix	(S6)		Dark Surface (S7) (LRR G)
Hydro	gen Sulfide (A4)		,	Loam	y Mucky N	/lineral (F1)		High Plains Depressions (F16)
Stratif	ied Layers (A5) (LF	RR F)	,	Loam	y Gleyed	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
1 cm l	Muck (A9) (LRR F,	G , H)		Deple	ted Matrix	(F3)		Reduced Vertic (F18)
X Deplet	ted Below Dark Su	rface (A11)		Redo	x Dark Su	rface (F6)		Red Parent Material (TF2)
	Dark Surface (A12	,	,			Surface (F7)		Other (Explain in Remarks)
	Mucky Mineral (S	-			x Depress	` '		tors of hydrophylic vegetation and
	n Mucky Peat or Pe					oressions (F16)		nd hydrology must be present, unless ped or problematic.
5 cm l	Mucky Peat or Pea	t (S3) (LRF	(F) 	(ML	RA 72 & 73	of LRR H)	uisturi	sed of problematic.
Restrictive L	ayer: (if observed)							
Restrictive L Type:	ayer: (if observed)							
							Hydric S	oil Present? Yes X No
Type: Depth <i>(inch</i>							Hydric S	oil Present? Yes X No
Туре:							Hydric S	oil Present? Yes X No
Type: Depth <i>(inch</i> Remarks:	nes):						Hydric S	oil Present? Yes X No _
Type: Depth (inch Remarks: HYDROLOGY	nes):						Hydric S	oil Present? Yes X No
Type: Depth (inch Remarks: HYDROLOG) Wetland Hyd	nes):	:	ired; check all tha	at apply)		s		oil Present? Yes X No
Type: Depth (inch Remarks: HYDROLOG) Wetland Hyd Primary Indica	ries): Y rology Indicators:	:		nt apply) Salt Crust ((B11)	S		
Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface	rology Indicators:	:			` ,			ors (minimum of two required)
Type: Depth (inch Remarks: HYDROLOG) Wetland Hyd Primary Indica Surfac High V	rology Indicators: ators (minimum of one Water (A1)	:	<u> </u>	Salt Crust	una (B13)			ors (minimum of two required)Surface Soil Cracks (B6)
Type:	rology Indicators: ators (minimum of one Water (A1) Nater Table (A2)	:	_	Salt Crust Aquatic Fa	una (B13) Sulfide Od	or (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surfact High V Satura Water	rology Indicators: ators (minimum of ope Water (A1) Nater Table (A2) ation (A3)	:	_	Salt Crust of Aquatic Father Hydrogen Stry-Season	una (B13) Sulfide Od n Water T	or (C1)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Type: Depth (inch Remarks: HYDROLOG) Wetland Hyd Primary Indica Surfac High V Satura Water Sedim	rology Indicators: ators (minimum of ace Water (A1) Vater Table (A2) ation (A3) Marks (B1)	:		Salt Crust of Aquatic Father Hydrogen Stry-Season	una (B13) Sulfide Od n Water T izospheres	lor (C1) able (C2)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surfac High V Satura Water Sedim Drift D	rology Indicators: ators (minimum of ace Water (A1) Nater Table (A2) ation (A3) Marks (B1) ment Deposits (B2)	:		Salt Crust (Aquatic Fa Hydrogen S Dry-Seasol Oxidized Rhi	una (B13) Sulfide Od n Water T izospheres t tilled)	lor (C1) able (C2) on Living Roots (C3)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D Algal I	rology Indicators: ators (minimum of ace Water (A1) Nater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) deposits (B3) Mat or Crust (B4) deposits (B5)	: one is requ		Salt Crust of Aquatic Far Hydrogen Strategy Oxidized Rhi (where not Presence of Thin Muck	una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce Surface (lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D Algal I Iron D Inunda	rology Indicators: ators (minimum of other Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aei	: one is requ		Salt Crust of Aquatic Father Advantage of Salt Cruster Salt Cruster of Salt Cr	una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce Surface (lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D Algal I Iron D Inunda	rology Indicators: ators (minimum of ace Water (A1) Nater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) deposits (B3) Mat or Crust (B4) deposits (B5)	: one is requ		Salt Crust of Aquatic Far Hydrogen Strategy Oxidized Rhi (where not Presence of Thin Muck	una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce Surface (lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C4) Geomorphic Position (D2)
Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface High V Satura Water Sedim Drift D Algal I Iron D Inunda	rology Indicators: ators (minimum of other Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) deposits (B5) ation Visible on Aei -Stained Leaves (E	: one is requ		Salt Crust of Aquatic Far Hydrogen Strategy Oxidized Rhi (where not Presence of Thin Muck	una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce Surface (lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) FAC-Neutral Test (D5)
Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surfac High V Satura Water Sedim Drift D Algal I Iron D Inunda Water	rology Indicators: ators (minimum of othe Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) deposits (B5) ation Visible on Aei s-Stained Leaves (E	: one is requ		Salt Crust of Aquatic Far Hydrogen Strategy Oxidized Rhi (where not Presence of Thin Muck	una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce Surface (I	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica High V Satura Water Sedim Drift D Algal I Iron D Inunda Water Field Observ Surface Water Water Table F	rology Indicators: ators (minimum of ace Water (A1) Water Table (A2) ation (A3) Marks (B1) Deposits (B3) Mat or Crust (B4) Deposits (B5) Ation Visible on Aer C-Stained Leaves (Exations:	: one is requ rial Imager 39)	y (B7) Yes Yes	Salt Crust of Aquatic Far Hydrogen Stranger Stra	una (B13) Sulfide Od n Water T izospheres t tilled) of Reduce Surface (I lain in Rel	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Project/Site 1-25f1-80 Interchange
Investigator(s): R. Newton, D. Soucy Section, Township, Range: S11 T13N R67W
Landform (hillslope, terrace, etc.): minor terrace Local Relief (concave, convex, none): none Slope (%): 0 Subregion (LRR): G - Western Great Plains Lat 223914.0626 Long: 742897.2912 Datum: WY E Subregion (LRR): G - Western Great Plains Lat 223914.0626 Long: 742897.2912 Datum: WY E Subregion (LRR): G - Western Great Plains Lat 223914.0626 Long: 742897.2912 Datum: WY E Subregion (LRR): G - Western Great Plains Lat 233914.0626 Long: 742897.2912 Datum: WY E Subrim: WY E Su
Subregion (LRR): G - Western Great Plains Lat. 223914.0626 Long: 742897.2912 Datum: WY E
Soil Map Unit Name: Urban land-Merden complex, 0 to 3 percent slopes
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X 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. Hydrolyptic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X Remarks: Paired upland point for PEM-22. VEGETATION - Use scientific names of plants. Tree Stratum (Plot size: 30x30 ft) % Cover Species? Status That Are OBL, FACW, or FAC: 0 (A) 2.
Are Vegetation
Are Vegetation
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes
Hydric Soil Present? Yes
Wetland Hydrology Present? Yes No X Remarks: Paired upland point for PEM-22. VEGETATION - Use scientific names of plants. Tree Stratum (Plot size: 30x30 ft Absolute My Cover Species? Dominant Indicator Status Number of Dominant Species Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) 2.
Paired upland point for PEM-22. VEGETATION - Use scientific names of plants. Dominant Species Statum (Plot size: 30x30 ft) Absolute Species Dominant Species That Are OBL, FACW, or FAC: 0 (A) (excluding FAC-):
Paired upland point for PEM-22. VEGETATION - Use scientific names of plants. Tree Stratum (Plot size: 30x30 ft)
VEGETATION - Use scientific names of plants. Tree Stratum (Plot size: 30x30 ft % Cover Absolute Species? Dominant Status Stratus Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (excluding FAC-): 0 (A) (A) (Excluding FAC-): 3. Total Number of Dominant Species Across All Strata: 1 (B) 5. Percent of Dominant Species That Are OBL, FACW, or FAC: (excluding FAC-): 0% (A/B) 1. Percent of Dominant Species That Are OBL, FACW, or FAC: (excluding FAC-): 0% (A/B) 1. Percent of Dominant Species That Are OBL, FACW, or FAC: (excluding FAC-): 0% (A/B) 1. Percent of Dominant Species That Are OBL, FACW, or FAC: (excluding FAC-): 0% (A/B) 1. Percent of Dominant Species That Are OBL, FACW, or FAC: (excluding FAC-): 0% (A/B) 1. Percent of Dominant Species That Are OBL, FACW, or FAC: (excluding FAC-): 0% (A/B) 2. Prevalence Index Worksheet: Total % Cover of: (excluding FAC-): 0% (A/B) 3. OBL species Oblination Species Oblinatio
Dominant Indicator Status Dominant Species Status Dominant Species Status Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) (excluding FAC-): Total Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A) (excluding FAC-): Total Number of Dominant Species Across All Strata: 1 (B)
Number of Dominant Species
Cexcluding FAC-): Cexcluding FAC:
3.
4. Species Across All Strata: 1 (B) 5. 0 = Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B) 1. 2. Prevalence Index Worksheet: Total % Cover of: Multiply by: 4. 0 EACW species 0 x 1 = 0 5. 0 FACW species 0 x 2 = 0 FACW species 0 x 3 = 0 FACW species 0 x 4 = 0 1. Bromus inermis 65 Y UPL UPL species 65 x 5 = 325 Column Totals: 65 (A) 325 (B) Prevalence Index B/A = 5.0 5.0 FREVALENCE
5.
D
Sapling/Shrub Stratum (Plot size: 15x15 ft)
1.
3.
3.
4. OBL species 0 x 1 = 0 5. FACW species 0 x 2 = 0 Herb Stratum (Plot size: 5x5 ft) 1. Bromus inermis 65 Y UPL UPL species 65 x 5 = 325 Column Totals: 65 (A) 325 (B) Prevalence Index = B/A = 5.0
5.
Column Totals: Colu
Herb Stratum (Plot size: 5x5 ft) FACU species 0 x 4 = 0 1. Bromus inermis 65 Y UPL UPL species 65 x 5 = 325 2. Column Totals: 65 (A) 325 (B) 3. Prevalence Index = B/A = 5.0
1. Bromus inermis 65 Y UPL UPL species 65 X 5 = 325 2. Column Totals: 65 (A) 325 (B) 3. Prevalence Index = B/A = 5.0
2. Column Totals: 65 (A) 325 (B) 7 (
3. Prevalence Index = B/A = 5.0
4 Hydrophytic Vegetation Indicators:
51. Rapid Test for Hydrophytic Vegetation
6 2. Dominance Test is >50%.
7
norting data in Remarks or on a senarate sheet
19
10 Problematic Hydrophytic Vegetation (Explain)
Woody Vine Stratum (Plot size: 30x30 ft)
1
2. present, unless disturbed or problematic. 0 = Total Cover
% Bare Ground in Herb Stratum 35 % Hydrophytic Vegetation Present? Yes X No
Remarks:

Depth	Matrix			Redox Fe	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	10 YR 2/2	100					Clay Loam	
8-18	10 YR 7/3	97	7.5 YR 5/6	3	С	M	Sand	
¹ Type: C=Cc	oncentration, D=Dep	oletion RM=	Reduced Matrix	CS=Cover	ed or Co	ated Sand Grains	² l ocation: Pl =	Pore Lining, M=Matrix
Hydric Soil I		Jiodon, ravi	Ttoddood Watiix,			atou ouriu oraino.		ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandy	Gleved N	Matrix (S4)		cm Muck (A9) (LRR I, J)
	Epipedon (A2)		-		Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	: Histic (A3)		-		ed Matrix	,		
	` ,		-			` ,		Park Surface (S7) (LRR G)
	ogen Sulfide (A4) fied Layers (A5) (LF	DD E\	-		-	Mineral (F1)		ligh Plains Depressions (F16)
	Muck (A9) (LRR F,	,	-		ed Matrix	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	, , ,		-			` ,		leduced Vertic (F18)
	eted Below Dark Sur		_			rface (F6)		led Parent Material (TF2)
	Dark Surface (A12	,	_			Surface (F7)		Other (Explain in Remarks)
Sand	y Mucky Mineral (S	•	B C U)			ions (F8)		ors of hydrophylic vegetation and
Sandy Mucky Mineral (S1) 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)				nion P	iains Dei	oressions (F16)	wetiand	hydrology must be present, unless
2.5 cr	-		_			of IDD U	disturbe	ed or problematic.
2.5 cr	m Mucky Peat or Pea Mucky Peat or Pea		_			B of LRR H)	disturbe	d or problematic.
2.5 cm	-	t (S3) (LRR	_			B of LRR H)	disturbe	d or problematic.
2.5 cm	Mucky Peat or Pea	t (S3) (LRR	_			B of LRR H)	disturbe	d or problematic.
2.5 cm 5 cm	Mucky Peat or Pea	t (S3) (LRR	_			3 of LRR H)		il Present? Yes No _X
2.5 cm 5 cm Restrictive L	Mucky Peat or Pea	t (S3) (LRR	_			3 of LRR H)		
2.5 cm 5 cm Restrictive L Type: Depth (inc	Mucky Peat or Pea	t (S3) (LRR	_			3 of LRR H)		
2.5 cm 5 cm Restrictive L Type: Depth (inc Remarks:	Mucky Peat or Pear ayer: (if observed) hes):	t (S3) (LRR	_			3 of LRR H)		
2.5 cm 5 cm Restrictive L Type: Depth (inc Remarks:	Mucky Peat or Pea _ayer: (if observed) hes): Y	t (S3) (LRR	_			3 of LRR H)		
2.5 cm 5 cm Type: Depth (inc Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Pea ayer: (if observed) hes): Y drology Indicators:	t (S3) (LRR	F)	(MLR			Hydric Soi	il Present? Yes No X
2.5 cm 5 cm Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Pea _ayer: (if observed) _hes): Y drology Indicators: eators (minimum of company)	t (S3) (LRR	red; check all tha	(MLR	A 72 & 73		Hydric Soi	il Present? Yes No X
2.5 cm 5 cm 7 cm Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	Mucky Peat or Pea Layer: (if observed) thes): Y Chrology Indicators: Eators (minimum of occessions)	t (S3) (LRR	red; check all tha	(MLR t apply) Salt Crust (I	SA 72 & 73	S	Hydric Soi	Il Present? Yes No X Tes (minimum of two required) Surface Soil Cracks (B6)
2.5 cm 5 cm Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc. Primary Indic. Surfa High	Mucky Peat or Pear Layer: (if observed) Thes): Y Clrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2)	t (S3) (LRR	red; check all tha	(MLR t apply) Salt Crust (I	B11) Ina (B13)	S	Hydric Soi	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
2.5 cm 5 cm Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Mucky Peat or Pear Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of occurrence (A1) Water Table (A2) Eation (A3)	t (S3) (LRR	red; check all tha	(MLR (apply) Salt Crust (I Aquatic Fau Hydrogen S	B11) Ina (B13) ulfide Od	Solor (C1)	Hydric Soi	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
2.5 cm 5 cm Type: Depth (inc) Remarks: HYDROLOG Wetland Hyo Primary Indic Surfa High Satur Wate	Mucky Peat or Pearager: (if observed) hes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	t (S3) (LRR	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season	B11) ina (B13) ulfide Od Water T	lor (C1)	Hydric Soi	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
2.5 cm 5 cm Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin	Mucky Peat or Pear Layer: (if observed) Thes): Y Arology Indicators: Cators (minimum of occurrence (A1) Water Table (A2) Cation (A3) r Marks (B1) ment Deposits (B2)	t (S3) (LRR	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz	B11) Ina (B13) ulfide Od Water T	Solor (C1)	Hydric Soi	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
2.5 cm 5 cm Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I	Mucky Peat or Pear Layer: (if observed) hes): Y drology Indicators: cators (minimum of occert (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)	t (S3) (LRR	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz	B11) Ina (B13) Iulfide Od Water T Toospheres tilled)	Solor (C1) Sable (C2) on Living Roots (C3)	Hydric Soi	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
2.5 cm 5 cm Type: Depth (inc) Remarks: HYDROLOG Wetland Hyo Primary Indic Surfa High Satur Wate Sedin Drift [Algal	Mucky Peat or Pearager: (if observed) hes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)	t (S3) (LRR	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz	B11) una (B13) ulfide Od Water Toospheres tilled) f Reduced	lor (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric Soi	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
2.5 cm 5 cm Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High ' Satur Wate Sedin Drift [Algal Iron D	Mucky Peat or Pea Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of of ce Water (A1) Water Table (A2) Lation (A3) In Marks (B1) Linent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	t (S3) (LRR	red; check all tha	(MLR (apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S	B11) Ina (B13) Iulfide Od Water T cospheres tilled) f Reducee	Solor (C1) Sable (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric Soi	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
2.5 cm 5 cm Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund	Mucky Peat or Pearager: (if observed) hes): Y drology Indicators: cators (minimum of occert) cators (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer	t (S3) (LRR	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz	B11) Ina (B13) Iulfide Od Water T cospheres tilled) f Reducee	Solor (C1) Sable (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric Soi	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund	Mucky Peat or Pea Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of of ce Water (A1) Water Table (A2) Lation (A3) In Marks (B1) Linent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	t (S3) (LRR	red; check all tha	(MLR (apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S	B11) Ina (B13) Iulfide Od Water T cospheres tilled) f Reducee	Solor (C1) Sable (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric Soi	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
2.5 cm 5 cm Festrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate Field Observ	Mucky Peat or Pearager: (if observed) hes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aerr-Stained Leaves (E	t (S3) (LRR	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S Dther (Expla	B11) una (B13) ulfide Od Water Toospheres tilled) f Reducee Surface (Gain in Rei	Solor (C1) Sable (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric Soi	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm Festrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indio Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate	Mucky Peat or Pearager: (if observed) hes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aerr-Stained Leaves (E	t (S3) (LRR	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S Dther (Expla	B11) Ina (B13) I	Solor (C1) Sable (C2) Son Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	Hydric Soi	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology
2.5 cm 5 cm Festrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High ' Satur Wate Sedin Drift I Algal Iron I Inund Wate Field Observ Surface Wate Water Table	Mucky Peat or Pea Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2) Lation (A3) If Marks (B1) Leposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aer In-Stained Leaves (External of the control of the co	t (S3) (LRR	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S Dther (Expla	BA 72 & 73 BA 74 BA 74 BA 74 BA 75 BA	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Hydric Soi	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determina	tion Da	ıta Form	ı - Gre	at Plains Reç	gion		
Project/Site: I-25/I-80 Interchange		City/0	County: Che	yenne/L	aramie	Sampling Da	ate: 8/1/20	019
Applicant/Owner: Wyoming Dept. of Tra	ansportation				State: WY	Sampling Po	oint: S-6	9
Investigator(s): R. Newton, D. Soucy					Sectio	n, Township, Range	S2 T13N R67	W
Landform (hillslope, terrace, etc.): minor of	depression	Loc	cal Relief (co	ncave, c	onvex, none):	concave	Slope (%):	: 0-1
Subregion (LRR): G - Western Great Pla	ins	Lat.	2252	37.3487	Long:	742604.1637	Datum: V	NΥE
Soil Map Unit Name: <u>Urban land-Merden co</u>	mplex, 0 to 3 per	rcent slope:	S		1	NWI Classification:	UPL	
Are climatic/hydrologic conditions on the site	typical for this tin	ne of year?	Yes	X	No ((If no, explain in Rer	narks)	
Are Vegetation , Soil , or Hy	drology si	gnificantly	disturbed? A	re "Norm	al Circumstance	s" present? Yes	Х	No
Are Vegetation , Soil , or Hy	drology n	aturally prol	blematic?		(If needed, e.	xplain any answers	in Remarks.)	
SUMMARY OF FINDINGS - Attach site map				ansects.	important featu	ıres, etc.	,	
Hydrophytic Vegetation Present? Yes			,		•	·		
Hydric Soil Present? Yes	No X		Is the Sa	mpled Ar	ea within a Wetla	and?	Yes No	X
<u> </u>	X No							<u> </u>
Wedana Hydrology Freschi: 163								
Remarks:								
Depressional area with dominant hydrophytic	vegetation and v	vetland hyd	rology but la	cking hy	dric soils.			
VEGETATION - Use scientific names of pla	nts.							
		Oominant	Indicator		nce Test Works			
<u>Tree Stratum</u> (Plot size: 30x30 ft)	% Cover	Species?	Status		of Dominant Sp			
1					e OBL, FACW, o <i>ing FAC-)</i> :	r FAC:	2	(A)
2				(Oxoraa	//g / / (3) .			
3		 .			umber of Domina		0	(5)
4				Species	Across All Strat	a:	2	(B)
5	0 = To	tal Cavar						
Cardinar/Charle Charles (Diet sine)		otal Cover			of Dominant Sp		4000/	(4.45)
Sapling/Shrub Stratum (Plot size: 15x	15 ft)			I nat Ar	e OBL, FACW, o	r FAC:	100%	(A/B)
1				Dunisala		ht-		
2				Prevale	nce Index Work Total % Cover		ا برام:+ایرا	b
3				OBL			$\frac{\text{Multiply I}}{\text{x 1} = 30}$	
4		 .		FACW	species species		$x = \frac{x}{x} = \frac{30}{110}$	
o	0 = To	otal Cover		FAC	species		x3 = 0	
Herb Stratum (Plot size: 5x5 ft)		ital Covel		FACU	species		$\frac{x}{x} = \frac{0}{0}$	
1. Hordeum jubatum	10	N	FACW	UPL	species		$\frac{x}{x}5 = \frac{0}{0}$	
2. Puccinellia nuttalliana	30	Y .	OBL	Column	•	85	(A) 140	
3. Distichlis spicata	45	Y	FACW	Column		alence Index = B/A =	_`	(b)
4		<u> </u>	171011	Hydron	hytic Vegetation			
5.				1.,, 40		est for Hydrophytic	Vegetation	
6.						nce Test is >50%.	vogotation	
7.						nce Index is <3.01		
8.						logical Adaptations ¹	(Provide sup-	
9.					•	ta in Remarks or on		et)
0.					Problemat	ic Hydrophytic Vege	etation (Explain)	ı
	85 = To	otal Cover				, , , ,	` . ,	
Woody Vine Stratum (Plot size: 30x30	ft)							
1.					¹ Indicators of hyd	dric soil and wetland h	ıvdrology must he	ρ
2.					•	isturbed or problemat		-
	0 =	Total Cove	er			· · · · · · · · · · · · · · · · · · ·		
% Bare Ground in Herb Stratum	5 %				Hydrophytic Veg	etation Present?	X Yes	No
					_			
Remarks:				1				

Profile Desc	cription: (Describe to	the depth needs	ed to docume	nt the indica	ator or	confirm the absenc	ce of indicators.)	
Depth	Matrix		F	Redox Feat	ures			
(inches)	Color (moist)	% Colo	r (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	10 YR 2/1	100					Clay Loam	30% road fill
¹ Type: C=Co	oncentration, D=Depl	etion, RM=Redu	ced Matrix, C	S=Covered	or Coa	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil	Indicators						Indicate	ors for Problematic Hydric Soils ³ :
-	sol (A1)			Sandy Gl	leyed N	/latrix (S4)		L cm Muck (A9) (LRR I, J)
	Epipedon (A2)			Sandy Re	-			Coast Prairie Redox (A16) (LRR F, G, H)
	(Histic (A3)			Stripped	,	,		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)			_		lineral (F1)		High Plains Depressions (F16)
	ified Layers (A5) (LRI	R F)			-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, C	•		 Depleted			ſ	Reduced Vertic (F18)
	eted Below Dark Surf			Redox Da				Red Parent Material (TF2)
	Dark Surface (A12)	,		_		Surface (F7)		Other (Explain in Remarks)
	ly Mucky Mineral (S1)	1		Redox Do		• ,		ors of hydrophylic vegetation and
	m Mucky Peat or Pea		<u> </u>	_	•	ressions (F16)		d hydrology must be present, unless
	Mucky Peat or Peat		<u> </u>	_		of LRR H)		ed or problematic.
				`		•		
_	Layer: (if observed)							
Type:								
Depth (inc	enes):						Hydric So	il Present? Yes No X
Remarks:								
HYDROLOG	Y							
	drology Indicators:							
_	cators (minimum of o	ne is required: ch	eck all that a	nnlv)		Se	econdary Indicato	rs (minimum of two required)
-	ace Water (A1)	io io rogalioa, or		It Crust (B1	1)	0.	occination in allocate	Surface Soil Cracks (B6)
	Water Table (A2)			uatic Fauna	•			Sparsley Vegetated Concave Surf. (B8)
	ration (A3)			drogen Sulf	. ,	or (C1)		Drainage Patterns (B10)
	er Marks (B1)			/-Season W				Oxidized Rhizospheres on Living
	ment Deposits (B2)					on Living Roots (C3)		Roots (C3) (where tilled)
	Deposits (B3)			here not til	•	on Living Roots (C3)		Crayfish Burrows (C8)
	Mat or Crust (B4)		•	esence of R	•	d Iron (C4)		Saturation Visible on Aerial Imagery (C9)
— ·	Deposits (B5)			in Muck Sur		, ,		_
	Deposits (เฮอ) dation Visible on Aeria	ol Imagany (P7)			•	•		Geomorphic Position (D2) FAC-Neutral Test (D5)
		0 , (,		ner (Explain	ı III Kei	ilaiks)	_^	
vvale	er-Stained Leaves (B9	') 						Frost-Heave Hummocks (D7) (LRR F)
Field Obser								
Surface Wat	er Present?		Yes	No		Depth (inches)		Wetland Hydrology
Water Table			Yes	No_		Depth (inches)		Present?
Saturation P	resent? (includes cap	illary fringe)	Yes	No	X	Depth (inches)		X_YesNo
Remarks:								

Wetland I	Determinat	ion Da	ta Form	ı - Gre	at Plains Reg	gion		
Project/Site: I-25/I-80 Interchange		City/C	County: Che	yenne/L	aramie	Sampling [Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Tra	nsportation	_			State: W	 Y Sampling P	oint:	S-70
Investigator(s): R. Newton, D. Soucy					Section	 on, Township, Rang	e: S2 T13	N R67W
Landform (hillslope, terrace, etc.): swale		Loca	al Relief (co	ncave, c	onvex, none):	concave	Slo	pe (%): 0-1
Subregion (LRR): G - Western Great Plai	ins	Lat.	2251	22.2602	Long:	742395.0791		atum: WYE
Soil Map Unit Name: Urban land-Merden co	mplex, 0 to 3 perc	ent slopes	i			NWI Classification:		UPL
Are climatic/hydrologic conditions on the site t	ypical for this time	e of year?	Yes	Х	No	(If no, explain in Re	emarks)	
Are Vegetation , Soil , or Hyd	droloav sia	nificantly d	isturbed? A	re "Norm	al Circumstance	s" present? Yes	,	X No
Are Vegetation , Soil , or Hyd		urally prob				xplain any answers	s in Pema	
		• •					, III Nemai	ins.)
SUMMARY OF FINDINGS - Attach site map		ing point it	ocalions, li	ansects,	important leati	ures, etc.		
Hydrophytic Vegetation Present? Yes						10	., .,	
Hydric Soil Present? Yes	X No		Is the Sa	mpled Ar	ea within a Wetla	and?	Yes X	No
Wetland Hydrology Present? Yes	X No							
Remarks:								
Depressional palustrine emergent wetland PE	M-23 receiving rui	n-off via ro	ad flume.					
VEGETATION - Use scientific names of plan	nts.							
Tara Charles (Districts 20020 ft)		minant	Indicator		nce Test Work			
Tree Stratum (Plot size: 30x30 ft)	% Cover Sp	ecies?	Status		of Dominant Sp OBL, FACW, o			4 (4)
1					ing FAC-):	or FAC.		1 (A)
2				ľ	,			
3					umber of Domina			4 (p)
4				Species	Across All Strat	la.		1 (B)
5	0 = Tota	al Cover						
Continue (Obsert Ottostoma (Blot of San Asia		ai Covei			of Dominant Sp		4.0	200/
Sapling/Shrub Stratum (Plot size: 15x1	5 ft)			I hat Ar	e OBL, FACW, o	or FAC:	10	00% (A/B)
1				<u> </u>				
2				Prevale	ence Index Worl			1.1 1 1
3				0.01	Total % Cove			ıltiply by:
4				OBL	species	10	<u>x</u> 1 =	10
5				FACW	species	80	<u>x</u> 2 =	160
	= Tota	al Cover		FAC	species	8	<u>x</u> 3 =	24
Herb Stratum (Plot size: 5x5 ft)				FACU	species	0	<u>x</u> 4 =	0
1. Hordeum jubatum	80	<u>Y</u>	FACW	UPL	species	0	x 5 =	0
2. Puccinellia nuttalliana	10	N _	OBL	Column		98	(A)	194 (B
3. Elymus riparius	8	<u>N</u>	FAC	L		alence Index = B/A	=	2.0
4				Hydrop	hytic Vegetatio			
5						est for Hydrophytic	; Vegetation	on
6						ince Test is >50%.		
7						ence Index is <3.01	4.5	
8						logical Adaptations ta in Remarks or o		
9								
0					Problemat	tic Hydrophytic Veg	etation (E	xplain)
	98 = Tota	al Cover						
Woody Vine Stratum (Plot size: 30x30 f	<u>[t</u>]							
1					¹ Indicators of hyd	dric soil and wetland	hydrology	must be
2					present, unless d	listurbed or problema	atic.	
<u> </u>		otal Cover						
% Bare Ground in Herb Stratum 2	%				Hydrophytic Veg	getation Present?	X	Yes No
Remarks:				•				

Depth	Matrix			Redox Fe	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10 YR 3/2	100					sandy clay	
3-16	10 YR 6/2	80	7.5 YR 5/8	20	С	M	sand	
¹ Type: C=Co	oncentration, D=Dep	oletion RM=	Reduced Matrix	CS=Cover	ed or Coa	ated Sand Grains	² l ocation: PI =	Pore Lining, M=Matrix
Hydric Soil I								ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandy	Gleved N	Matrix (S4)		L cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_	X Sandy	-			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		-		ed Matrix	,		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)		-			Mineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LF	DD E\	-		-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	,	-		ed Matrix		,	
	eted Below Dark Su		-			rface (F6)		Reduced Vertic (F18) Red Parent Material (TF2)
	Dark Surface (A12		-			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S		-			ions (F8)		, ,
Janu		•	RG H)			oressions (F16)		ors of hydrophylic vegetation and I hydrology must be present, unless
2.5 cr	m Mucky Peat or Pa			riigiri	iaii is Def	oressions (i io)		
	m Mucky Peat or Pea Mucky Peat or Pea		-	(MIR	Δ 72 & 73	of LRR H)	disturbe	ed or problematic.
	m Mucky Peat or Pea Mucky Peat or Pea		-	(MLR	A 72 & 73	3 of LRR H)	disturbe	ed or problematic.
5 cm	-		-	(MLR	A 72 & 73	B of LRR H)	disturbe	ed or problematic.
5 cm Restrictive L Type:	Mucky Peat or Pea		-	(MLR	A 72 & 73	3 of LRR H)	disturbe	ed or problematic.
5 cm	Mucky Peat or Pea		-	(MLR	A 72 & 73	3 of LRR H)		il Present? Yes X No
5 cm Restrictive L Type:	Mucky Peat or Pea		-	(MLR	A 72 & 73	3 of LRR H)		
5 cm Restrictive L Type: Depth (inc.)	Mucky Peat or Pea		-	(MLR	A 72 & 73	B of LRR H)		
5 cm Restrictive L Type: Depth (inc.) Remarks:	Mucky Peat or Pea		-	(MLR	A 72 & 73	B of LRR H)		
Femarks:	Mucky Peat or Pea	t (S3) (LRR	-	(MLR	A 72 & 73	3 of LRR H)		
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc	Mucky Peat or Pea _ayer: (if observed) hes): Y	t (S3) (LRR	F)		A 72 & 73		Hydric So	
Femarks: 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic	Mucky Peat or Pea Layer: (if observed) Thes): Y Arology Indicators: cators (minimum of cators)	t (S3) (LRR	red; check all that	t apply)			Hydric So	il Present? Yes X No
Femarks: 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic Surface	Mucky Peat or Pea Layer: (if observed) thes): Y Chrology Indicators: Eators (minimum of occessions)	t (S3) (LRR	red; check all that	<i>t apply)</i> Salt Crust (I	B11)	S	Hydric So	il Present? Yes X No
Femarks: Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfar High	Mucky Peat or Pear Layer: (if observed) Thes): Y Cloology Indicators: Eators (minimum of oce Water (A1) Water Table (A2)	t (S3) (LRR	red; check all tha	<i>t apply)</i> Salt Crust (I Aquatic Fau	311) ina (B13)	s	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Femarks: Type: _ Depth (inc.) Depth (inc.) Primary Indice	Mucky Peat or Pearager: (if observed) hes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3)	t (S3) (LRR	red; check all tha	<i>t apply)</i> Salt Crust (I Aquatic Fau Hydrogen S	311) ina (B13) ulfide Od	Solor (C1)	Hydric So	il Present? Yes X No
Femarks: HYDROLOG Wetland Hyc Primary Indic Surfar High Satura Water	Mucky Peat or Pearager: (if observed) hes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	t (S3) (LRR	red; check all tha	<i>t apply)</i> Salt Crust (I Aquatic Fau Hydrogen S Dry-Season	B11) ina (B13) ulfide Od Water T	Solor (C1)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfar High V Satur: Watel Sedin	Mucky Peat or Pear Layer: (if observed) Thes): Y Arology Indicators: Cators (minimum of occurrence (A1) Water Table (A2) Cation (A3) r Marks (B1) ment Deposits (B2)	t (S3) (LRR	red; check all tha	<i>t apply)</i> Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz	311) Ina (B13) ulfide Od Water T	Solor (C1)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive L Type: _ Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High V Satura Watel Sedin Drift D	Mucky Peat or Pear Layer: (if observed) hes): Y drology Indicators: cators (minimum of occert (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)	t (S3) (LRR	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not	B11) Ina (B13) Ulfide Od Water T cospheres tilled)	Solor (C1) Sable (C2) on Living Roots (C3)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High V Satur: Water Sedin Drift I Algal	Mucky Peat or Pearager: (if observed) hes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)	t (S3) (LRR	red; check all tha	t apply) Salt Crust (E Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz (where not	B11) una (B13) ulfide Od Water Toospheres tilled) f Reducee	lor (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS)
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Water Sedin Drift E Algal Iron E	Mucky Peat or Pea Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2) Lation (A3) r Marks (B1) Leposits (B3) Mat or Crust (B4) Deposits (B5)	t (S3) (LRR	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence of	311) Ina (B13) Ilfide Od Water T Tospheres tilled) f Reduced	Solor (C1) Table (C2) Table (C2) Table (C3) Table (C4) Table (C4) Table (C4)	Hydric So	il Present? Yes X No Tres (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2)
Femarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift D Algal Iron D	Mucky Peat or Pearager: (if observed) hes): Y drology Indicators: cators (minimum of occert (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer	t (S3) (LRR	red; check all tha	t apply) Salt Crust (E Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz (where not	311) Ina (B13) Ilfide Od Water T Tospheres tilled) f Reduced	Solor (C1) Table (C2) Table (C2) Table (C3) Table (C4) Table (C4) Table (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Femarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift D Algal Iron D Inund Water	Mucky Peat or Pear Layer: (if observed) hes): Y drology Indicators: cators (minimum of occertification (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer r-Stained Leaves (E	t (S3) (LRR	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence of	311) Ina (B13) Ilfide Od Water T Tospheres tilled) f Reduced	Solor (C1) Table (C2) Table (C2) Table (C3) Table (C4) Table (C4) Table (C4)	Hydric So	il Present? Yes X No Tres (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2)
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyo Primary Indic Surfar High V Satur: Water Sedin Drift D Algal Iron D Inund Water Field Observ	Mucky Peat or Pearager: (if observed) hes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aerr-Stained Leaves (E	t (S3) (LRR	red; check all that	t apply) Salt Crust (E Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz (where not Presence of Thin Muck S Other (Expla	B11) una (B13) ulfide Od Water Toospheres tilled) f Reducee Surface (Gain in Rei	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyo Primary Indic Surface High V Satura Water Sedin Drift E Algal Iron E Inund Water Surface Water Surface Water	Mucky Peat or Pea Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2) Lation (A3) If Marks (B1) Leposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aer T-Stained Leaves (Example) Vations: Ler Present?	t (S3) (LRR	red; check all that	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence of Thin Muck S Other (Expla	311) Ina (B13) Illide Od Water Toospheres tilled) f Reduced Gurface (Gain in Rei	Solor (C1) Sable (C2) Son Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive L Type: _ Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High V Satura Water Sedin Drift D Inund Water Field Observ Surface Water Water Table	Mucky Peat or Pea Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2) Lation (A3) If Marks (B1) Leposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aer T-Stained Leaves (Example) Vations: Ler Present?	t (S3) (LRR	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence of Thin Muck S Other (Expla	B11) una (B13) ulfide Od Water Toospheres tilled) f Reducee Surface (Cain in Red	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determin	ation Da	ita Forn	n - Grea	at Plains Re	gion	
Project/Site: I-25/I-80 Interchange		City/	County: Ch	eyenne/La	aramie	Sampling Date	8/1/2019
Applicant/Owner: Wyoming Dept. of To	ransportation				State: W	Y Sampling Point	S-71
Investigator(s): R. Newton, D. Soucy					Secti	on, Township, Range: S	2 T13N R67W
Landform (hillslope, terrace, etc.): roads	lope	Loc	cal Relief (c	oncave, co	onvex, none):	none	Slope (%): <u>0-3</u>
Subregion (LRR): G - Western Great Plant	ains	Lat.	2251	120.2458	Long:	742399.3624	Datum: WY E
Soil Map Unit Name: <u>Urban land-Merden co</u>	omplex, 0 to 3 p	ercent slope	S			NWI Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for this t	time of year?	Ye	s <u>X</u>	No	(If no, explain in Remar	rks)
Are Vegetation, Soil, or H	ydrology	significantly	disturbed?	Are "Norm	al Circumstanc	es" present? Yes	X No
Are Vegetation , Soil , or H	ydrology	naturally pro	blematic?		(If needed,	explain any answers in l	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing sam	pling point l	locations, t	ransects,	important feat	tures, etc.	
Hydrophytic Vegetation Present? Yes	No X						
Hydric Soil Present? Yes	No X		Is the Sa	ampled Are	ea within a Wet	land? Yes	s No X
Wetland Hydrology Present? Yes	No X						
Remarks:							
Paired upland point for PEM-23.							
VEGETATION - Use scientific names of pla	ants.						
Torra Otrack may (Plat along and October 1)	Absolute	Dominant	Indicator		nce Test Worl		
<u>Tree Stratum</u> (Plot size: 30x30 ft)	% Cover	Species?	Status		of Dominant S	•	0 (1)
1					e OBL, FACW, ing FAC-):	or FAC.	0 (A)
2							
3					umber of Domin		2 (n)
4				Species	Across All Stra	<u>-</u>	(B)
5	0 = 7	Total Cover					
Sapling/Shrub Stratum (Plot size: 15x	(15 ft)	Total Gover			of Dominant S e OBL, FACW,		0% (A/B)
2.				Prevale	nce Index Wo	rksheet:	
3.					Total % Cove	er of:	Multiply by:
4.		-		OBL	species	0 x 1	
5.				FACW	species	5 x 2	! = 10
	0 = 7	Total Cover		FAC	species	0 x 3	s = 0
Herb Stratum (Plot size: 5x5 ft)				FACU	species	20 x 4	= 80
1. Agropyron cristatum	20	Υ	NI	UPL	species	30 x 5	= 150
2. Melilotus officinalis	15	Υ	FACU	Column	Totals:		(B) 240
3. Linaria dalmatica	10	N	NI		Prev	valence Index = B/A =	4.4
4. Cirsium arvense	5	N	FACU	Hydrop	hytic Vegetation	on Indicators:	
5. Hordeum jubatum	5	N	FACW		1. Rapid	Test for Hydrophytic Ve	getation
6						ance Test is >50%.	
7						ence Index is <3.01	
8						ological Adaptations¹ (Pi	•
9.						ata in Remarks or on a s	
0					Problema	atic Hydrophytic Vegetat	ion (Explain)
		Total Cover					
Woody Vine Stratum (Plot size: 30x30	<u>ft</u>)						
1						dric soil and wetland hydr	ology must be
2		- Total O			present, unless	disturbed or problematic.	
% Bare Ground in Herb Stratum	0 45 %	= Total Cove	ŧI		Hudrophytic \/-	gotation Procest?	Voc V No
Dale Ground III Helb Stratuili	/0				πγατομπγίις νε	getation Present?	Yes X No
Do months.				1			
Remarks:	IIDI fortbi	alvoic					
Species with no indicator (NI) are treated as	of Lioi this and	มเ y อเอ้.					

Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Presence of Reduced Iron (C4) Drainage Patterns (B10) Oxidized Rhizospheres or Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial In	Depth	Matrix			Redox Fe	atures			
3-18 2.5 Y 7/3 85 7.5 Y R 5/8 15 C M sandy clay **Indicators** **Indicators*	(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. Time of the state of	0-3	10 YR 3/2	100					clay loam	
Hydric Soil Indicators Histosol (A1) Histosol (A2) Black Histic (A3) Stripped Matrix (S6) Black Histic (A3) Stripped Matrix (S6) Black Histic (A3) Stripped Matrix (S6) Dark Surface (57) (LRR 6, J) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (A5) (LRR F, G, H) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Depleted Dark Surface (F6) Red Parent Material (TF2) Thick Dark Surface (A12) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Thick Dark Surface (A12) Some Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S2) (LRR G, H) Some Mucky Peat or Peat (S3) (LRR F) Wettand Hydrology Indicators: Hydrology Wettand Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of one is required; check all that apply) Secondary In	3-18	2.5 Y 7/3	85	7.5 YR 5/8	15	С	M	sandy clay	
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Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Aquatic Fauna (B13) Aquatic Fauna (B13) Aquatic Fauna (B13) Aquatic Fauna (B13) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Drainage Patterns (B10) Oxidized Rhizospheres on Roots (C3) (where not tilled) Presence of Reduced Iron (C4) Saturation Visible on Aerial Improved the Marks (B5) Thin Muck Surface (C7) Surface Soil Cracks (B6) Sparsley Vegetated Concave States (B10) Oxidized Rhizospheres on Civing Roots (C3) Crayfish Burrows (C8) Saturation Visible on Aerial Improved the Marks (B5) Thin Muck Surface (C7) Geomorphic Position (D2)	5 cm Mestrictive Land Type: Depth (inch: Remarks:	Mucky Peat or Peat ayer: (if observed) hes):		_	_		of LRR H)		
High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Aquatic Fauna (B13) Aquatic Fauna (B13) Aquatic Fauna (B13) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Presence of Reduced Iron (C4) Saturation Visible on Aerial Im Geomorphic Position (D2)	5 cm M Restrictive Le Type: Depth (inch Remarks:	Mucky Peat or Peat ayer: (if observed) hes):	t (S3) (LRR I	_	_		of LRR H)		
Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Oxidized Rhizospheres or Roots (C2) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Presence of Reduced Iron (C4) Saturation Visible on Aerial In Geomorphic Position (D2)	5 cm M Restrictive Lo Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators:	t (S3) (LRR I	F)	(MLR			Hydric Soil	Present? Yes No
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Dry-Season Water Table (C2) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Crayfish Burrows (C8) Presence of Reduced Iron (C4) Saturation Visible on Aerial Im Geomorphic Position (D2)	5 cm M Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators: ators (minimum of c	t (S3) (LRR I	ed; check all that	(MLR	A 72 & 73		Hydric Soil	Present? Yes No
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial In Geomorphic Position (D2)	5 cm M Restrictive Lo Type: Depth (inch Remarks: HYDROLOGY Wetland Hyde Primary Indica Surface	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1)	t (S3) (LRR I	ed; check all that	apply) alt Crust (E	SA 72 & 73	S	Hydric Soil	Present? Yes No
Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Oxidized Rhizospheres on Living Roots (C3) (where not tilled) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Geomorphic Position (D2)	5 cm M Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surfac High V	Mucky Peat or Peat ayer: (if observed) thes): Y Irology Indicators: ators (minimum of oce Water (A1) Nater Table (A2)	t (S3) (LRR I	ed; check all that	apply) alt Crust (E	B11) Ina (B13)	s	Hydric Soil	Present? Yes No
Algal Mat or Crust (B4) Iron Deposits (B5) Presence of Reduced Iron (C4) Thin Muck Surface (C7) Geomorphic Position (D2)	5 cm M Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surface High V Satura	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators: ators (minimum of occewater (A1) Nater Table (A2) ation (A3)	t (S3) (LRR I	ed; check all that	apply) alt Crust (Equatic Fau	B11) Ina (B13) ulfide Od	or (C1)	Hydric Soil	Present? Yes No s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Iron Deposits (B5) Thin Muck Surface (C7) Geomorphic Position (D2)	5 cm M Restrictive Lo Type: Depth (inch Remarks: HYDROLOGY Wetland Hyde Primary Indica Surface High V Satura Water	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	t (S3) (LRR I	ed; check all that	apply) alt Crust (Equatic Fau	B11) ina (B13) ulfide Od Water Ta	or (C1) able (C2)	Hydric Soil	Present? Yes No s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
	5 cm M Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hyd Primary Indica Surface High V Satura Water Sedim	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Nater Table (A2) ation (A3) r Marks (B1) hent Deposits (B2)	t (S3) (LRR I	ed; check all that	apply) alt Crust (E quatic Fau lydrogen S lydrogen Shry-Season	B11) Ina (B13) ulfide Od Water Ta	or (C1) able (C2)	Hydric Soil	Present? Yes No_ s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
	5 cm M Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surfac High V Satura Water Sedim Drift D	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators: ators (minimum of observed) Water (A1) Nater Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3)	t (S3) (LRR I	ed; check all that A C C (1)	apply) alt Crust (Equatic Fau ydrogen S ry-Season xidized Rhiz	B11) Ina (B13) ulfide Od Water Tatospheres	or (C1) able (C2) on Living Roots (C3)	Hydric Soil	Present? Yes No_ s (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
	5 cm M Restrictive Lot Type: Depth (inch Remarks: HYDROLOGY Wetland Hyde Primary Indica Surface High V Satura Water Sedim Drift D Algal M	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Nater Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4)	t (S3) (LRR I	ed; check all that S A C C C C C C	apply) alt Crust (Equatic Faulydrogen Sury-Season xidized Rhizwhere not resence of	B11) una (B13) ulfide Od Water Tatospheres tilled) f Reduced	or (C1) able (C2) on Living Roots (C3)	Hydric Soil	Present? Yes No
	5 cm M Restrictive Lo Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surface High V Satura Water Sedim Drift D Algal M Iron Do	Mucky Peat or Peat ayer: (if observed) thes): Y Irology Indicators: ators (minimum of observed) Water (A1) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	one is require	ed; check all that A C C ()	apply) alt Crust (Equatic Fau ydrogen Sory-Season xidized Rhiz where not resence of hin Muck Some	B11) Ina (B13) Iulfide Od Water Tatospheres tilled) f Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric Soil	Present? Yes No
Field Observations:	5 cm M Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surface High V Satura Water Sedim Drift D Algal M Iron De	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators: ators (minimum of observed) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aer	i (S3) (LRR I	ed; check all that A C C ()	apply) alt Crust (Equatic Fau ydrogen Sory-Season xidized Rhiz where not resence of hin Muck Some	B11) Ina (B13) Iulfide Od Water Tatospheres tilled) f Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric Soil	Present? Yes No
	5 cm M Restrictive La Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surface High V Satura Water Sedim Drift D Algal M Iron Do Inunda Water	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators: ators (minimum of observed) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aer r-Stained Leaves (B	i (S3) (LRR I	ed; check all that A C C ()	apply) alt Crust (Equatic Fau ydrogen Sory-Season xidized Rhiz where not resence of hin Muck Some	B11) Ina (B13) Iulfide Od Water Tatospheres tilled) f Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric Soil	Present? Yes No
	5 cm M Restrictive Lo Type: Depth (inch Remarks: HYDROLOGY Wetland Hydr Primary Indica Surface High V Satura Water Sedim Drift D Algal M Iron Do Inunda Water Field Observa	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators: ators (minimum of observed) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aer r-Stained Leaves (B	i (S3) (LRR I	ed; check all thatSC(()PTC	apply) alt Crust (Equatic Faultydrogen Sury-Season wide and the resence of thin Muck Suther (Explain)	B11) una (B13) ulfide Od Water Tatospheres tilled) f Reduced Surface (Cain in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Hydric Soil	Present? Yes No
Saturation Present? (includes capillary fringe) Yes No X Depth (inches) Yes X	5 cm M Restrictive Lot Type: Depth (inch Remarks: HYDROLOGY Wetland Hydi Primary Indica Surface High V Satura Water Sedim Drift D Algal M Iron Do Inunda Water Field Observ: Surface Wate	Mucky Peat or Peat ayer: (if observed) hes): Y Irology Indicators: ators (minimum of observed) Water (A1) Water Table (A2) ation (A3) Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aer r-Stained Leaves (Bay) Vations: ar Present?	i (S3) (LRR I	ed; check all that A C C ()	apply) alt Crust (E quatic Fau ydrogen S ry-Season xidized Rhiz where not resence of hin Muck S other (Expla	B11) Ina (B13) I	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric Soil	Present? Yes No S (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F

Wetland	Determi	nation Da	ata Forr	n - Gre	at Plains Re	gion		
Project/Site: I-25/I-80 Interchange		City	/County: Ch	eyenne/L	aramie	Sampling D	ate: 8/1/201	9
Applicant/Owner: Wyoming Dept. of Tr	ansportation	1			State: W	Y Sampling Po	oint: S-72	
Investigator(s): R. Newton, D. Soucy					Secti	on, Township, Range	: S11 T13N R67V	N
Landform (hillslope, terrace, etc.): swale		Lo	cal Relief (c	oncave, c	onvex, none):	concave	Slope (%): 0	0-3
Subregion (LRR): G - Western Great Pla	ains	Lat	. 224	882.4396	Long:	741978.0813	Datum: W	ΥE
Soil Map Unit Name: Urban land-Merden co	omplex, 0 to 3	percent slope	es			NWI Classification:	UPL	
Are climatic/hydrologic conditions on the site	typical for this	s time of year?	? Ye	s X	No	(If no, explain in Rer	narks)	
Are Vegetation , Soil , or Hy	/drology	significantly	disturbed?	Are "Norm	al Circumstanc	es" present? Yes	X N	No
Are Vegetation , Soil , or Hy	/drology	naturally pro	oblematic?		(If needed,	explain any answers	in Remarks.)	
SUMMARY OF FINDINGS - Attach site map		_		ransects.	important fea	tures, etc.	,	
	X No				•	,		
`	X No		Is the Sa	ampled Ar	ea within a Wet	land?	Yes X No	
Wetland Hydrology Present? Yes	X No	_						_
vvetiana riyarology i resent:	<u> </u>	_						
Remarks:								
Depressional palustrine emergent wetland Pl	EM-24 receivir	ng run-off via f	lume.					
VEGETATION - Use scientific names of pla	ants.							
Trac Stratum (Blat size: 20v20 ft)	Absolute	Dominant	Indicator		ance Test Work			
Tree Stratum (Plot size: 30x30 ft)	% Cover	Species?	Status		r of Dominant S e OBL, FACW,	•	2	(4)
1					ing FAC-):	orrac.	2	(A)
3.								
4.					umber of Domir Across All Stra		2	(B)
5.				Ороско	7 (01000 7 (11 0 (10	ita.		(6)
·	0 =	Total Cover						
Sapling/Shrub Stratum(Plot size: 15x	15 ft)				t of Dominant S e OBL, FACW,		100%	(A/B)
1)			matra	C OBE, I MOVV,	011710.	10070	(~, 0)
2				Prevale	ence Index Wo	rksheet:		
3.				1	Total % Cove		Multiply by	v :
4.				OBL	species		x = 1 = 75	
5.				FACW	•		x 2 = 38	_
	0 =	Total Cover		FAC	species	0	x 3 = 0	_
Herb Stratum (Plot size: 5x5 ft)				FACU	species		x 4 = 0	_
1. Typha angustifolia	35	Υ	OBL	UPL	species	0	x 5 = 0	_
2. Schoenoplectus pungens	40	Υ	OBL	Column	Totals:	94	(A) 113	(B)
3. Juncus compressus	14	N	FACW		Prev	valence Index = B/A :		_ ` `
4. Epilobium ciliatum	5	N	FACW	Hydrop	hytic Vegetation	on Indicators:		
5.					X 1. Rapid	Test for Hydrophytic	Vegetation	
6.					X 2. Domin	ance Test is >50%.		
7.					X 3. Preval	ence Index is ≤3.01		
8.					•	ological Adaptations¹		
9.					porting d	ata in Remarks or on	a separate sheet)	:)
0.					Problema	atic Hydrophytic Vege	etation (Explain)	
	94 =	Total Cover						
Woody Vine Stratum (Plot size: 30x30	ft)							
1					¹ Indicators of hy	dric soil and wetland h	ydrology must be	
2.						disturbed or problema		
	0	= Total Cov	er					
% Bare Ground in Herb Stratum	6 %				Hydrophytic Ve	getation Present?	X Yes	No
								_
Remarks:				•				

	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10 YR 6/2	85	2.5 Y 6/6	15	С	M	Clay	
4-6	10 YR 2/1	100					Clay	
6-16	2.5 Y 6/2	95	2.5 Y 6/8	5	С	M	Clay	
¹ Type: C=Co	oncentration, D=Dep	oletion RM	=Reduced Matrix	CS=Cove	red or Coa	ated Sand Grains	² Location: PL =	Pore Lining, M=Matrix
Hydric Soil I			Troubout mann					ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sand	v Gleved N	Matrix (S4)		cm Muck (A9) (LRR I, J)
	Epipedon (A2)		-		y Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		-		ed Matrix	· ·		Park Surface (S7) (LRR G)
	ogen Sulfide (A4)		-			/lineral (F1)		ligh Plains Depressions (F16)
	fied Layers (A5) (LF	PR F)	-			Matrix (F2)	'	(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	•	-		eted Matrix		D	educed Vertic (F18)
	eted Below Dark Su		-		x Dark Sur			ed Parent Material (TF2)
	Dark Surface (A12		-			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S	,	-		x Depressi	` '		, .
	m Mucky Peat or Pe	•	RRGH)		•	pressions (F16)		ors of hydrophylic vegetation and hydrology must be present, unless
	Mucky Peat or Pea		-		RA 72 & 73			ed or problematic.
5 cm			••,	(or Entry		
							1	
	_ayer: (if observed)							
Restrictive L	_ayer: (if observed)							
Restrictive I	_ayer: (if observed)						Hydric Soi	il Present? Yes X No
Restrictive L	_ayer: (if observed)						Hydric Soi	il Present? Yes X No
Restrictive I Type: Depth (inc	_ayer: (if observed)						Hydric Soi	i l Present? Yes X No
Restrictive I Type: Depth (inc Remarks:	_ayer: (if observed) hes):						Hydric Soi	il Present? Yes X No
Restrictive I Type: Depth (inc Remarks:	_ayer: (if observed) hes):						Hydric Soi	il Present? Yes X No
Restrictive I Type: Depth (inc) Remarks: HYDROLOG	Ayer: (if observed) hes): Y drology Indicators:		ired; check all tha	t apply)		s		
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of o				(B11)	s		rs (minimum of two required)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic	Ayer: (if observed) thes): Y drology Indicators: eators (minimum of o			Salt Crust	` '			rs (minimum of two required) Surface Soil Cracks (B6)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	Ayer: (if observed) thes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2)			Salt Crust Aquatic Fa	una (B13)			rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3)		_	Salt Crust Aquatic Fa Hydrogen S	una (B13) Sulfide Od	or (C1)		rs (minimum of two required) Surface Soil Cracks (B6)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Ayer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)			Salt Crust Aquatic Fa Hydrogen S Dry-Seaso	una (B13) Sulfide Od n Water Ta	or (C1) able (C2)	econdary Indicator	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	Ayer: (if observed) thes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2)			Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Oxidized Rh	una (B13) Sulfide Od n Water Ta izospheres o	or (C1)	econdary Indicator	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I	Auger: (if observed) Thes): Trology Indicators: Eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3)			Salt Crust Aquatic Fa Hydrogen Ory-Seaso Oxidized Rh	una (B13) Sulfide Od n Water Ta izospheres o	or (C1) able (C2) on Living Roots (C3)	econdary Indicator	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal	Ayer: (if observed) Thes): Y Arology Indicators: Eators (minimum of oce Water (A1) Water Table (A2) Eation (A3) r Marks (B1) Enent Deposits (B2) Deposits (B3) Mat or Crust (B4)			Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Dxidized Rh (where no	una (B13) Sulfide Od n Water Taizospheres of t tilled)	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicator	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I	Y drology Indicators: eators (minimum of of other to the company of the company o	one is requ		Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Dxidized Rh (where no Presence of Thin Muck	una (B13) Sulfide Od n Water Ta izospheres t tilled) of Reduced Surface (0	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicator	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I	Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer	one is requ		Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Dxidized Rh (where no Presence of Thin Muck	una (B13) Sulfide Od n Water Taizospheres of t tilled)	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicator	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate	Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer r-Stained Leaves (E	one is requ		Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Dxidized Rh (where no Presence of Thin Muck	una (B13) Sulfide Od n Water Ta izospheres t tilled) of Reduced Surface (0	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	econdary Indicator	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
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Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate Field Observ Surface Wate Water Table	Ayer: (if observed) Area of the served) Y Arology Indicators: Eators (minimum of the served) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aeror-Stained Leaves (Example) Vations: er Present?	one is required in the second	Yes_Yes_	Salt Crust Aquatic Fa Hydrogen S Dry-Seaso Dxidized Rh (where no Presence of Thin Muck Other (Exp	una (B13) Sulfide Od n Water Ta izospheres t tilled) of Reduced Surface (C clain in Rer	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	econdary Indicator	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Determinatio	n Data Form	- Great Plains Regio	n	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Transportation	, , <u></u>	State: WY	Sampling Point:	S-73
Investigator(s): R. Newton, D. Soucy		Section, T	ownship, Range: S11	T13N R67W
Landform (hillslope, terrace, etc.): roadslope	Local Relief (co	ncave, convex, none): n	one S	lope (%): 0
Subregion (LRR): G - Western Great Plains	Lat. 22488	34.0235 Long:	741983.4982	Datum: WYE
Soil Map Unit Name: Urban land-Merden complex, 0 to 3 percen	t slopes	NW	I Classification:	UPL
Are climatic/hydrologic conditions on the site typical for this time of	f year? Yes	X No (If n	o, explain in Remarks)	
Are Vegetation, Soil, or Hydrologysignifi	icantly disturbed? A	re "Normal Circumstances" p	resent? Yes	X No
Are Vegetation , Soil , or Hydrology natura	ally problematic?	(If needed, expla	ain any answers in Rem	narks.)
SUMMARY OF FINDINGS - Attach site map showing sampling	point locations, tra	ansects, important features	s, etc.	
Hydrophytic Vegetation Present? Yes No X				
Hydric Soil Present? Yes No X	Is the Sar	npled Area within a Wetland	? Yes	No X
Wetland Hydrology Present? Yes No X				
Remarks;				
Remarks.				
Paired upland point for PEM-24.				
VEGETATION - Use scientific names of plants.				
Absolute Domin	nant Indicator	Dominance Test Workshe	et:	
Tree Stratum (Plot size: 30x30 ft) % Cover Speci		Number of Dominant Specie	es	
1		That Are OBL, FACW, or FA	AC:	0 (A)
2		(excluding FAC-):		
3		Total Number of Dominant		
4		Species Across All Strata:		2 (B)
5				
0 = Total (Cover	Percent of Dominant Specie		00/ (4/0)
Sapling/Shrub Stratum (Plot size: 15x15 ft)		That Are OBL, FACW, or FA		0% (A/B)
		Prevalence Index Worksh	eet·	
3.		Total % Cover of		1ultiply by:
4.		OBL species	0 x 1 =	0
5.		FACW species	5 x 2 =	10
0 = Total 0	Cover	FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)		FACU species	50 x 4 =	200
1. Cirsium arvense 20 Y	FACU	UPL species	0 x 5 =	0
2. <u>Hordeum jubatum</u> 5 N	FACW	Column Totals:	55 (A)	210 (B)
3. Elymus repens 30 Y			ice Index = B/A =	3.8
4		Hydrophytic Vegetation In		
5			for Hydrophytic Vegeta	ation
6			Test is >50%. Index is <3.0¹	
			cal Adaptations¹ (Provi	de sun-
9.			Remarks or on a sepa	
10.	<u> </u>	Problematic H	lydrophytic Vegetation	(Explain)
55 = Total 0	Cover		.,	(—)
Woody Vine Stratum (Plot size: 30x30 ft)				
1.		¹ Indicators of hydric	soil and wetland hydrolog	y must he
2.		present, unless distu	, ,	5,
0 = Tota	al Cover			
% Bare Ground in Herb Stratum 45 %		Hydrophytic Vegeta	tion Present?	Yes X No
				
Remarks:				

Depth	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10 YR 3/2	100					Clay loam	
2-18	2.5 Y 7/3	85	7.5 YR 5/8	15	С	M	Sandy clay	
¹ Type: C=Co	oncentration, D=De	nletion RM:	=Reduced Matri:	CS=Cove	red or Co:	ated Sand Grains	² l ocation: PL=	Pore Lining, M=Matrix
Hydric Soil				., 00 0010.				ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandy	/ Gleved N	Matrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)				/ Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)				ed Matrix	,		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)					Mineral (F1)		High Plains Depressions (F16)
	ified Layers (A5) (LF	DD E/			,	Matrix (F2)	'	(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	,			ted Matrix		r	Reduced Vertic (F18)
	eted Below Dark Su					rface (F6)		Red Parent Material (TF2)
	Dark Surface (A12	, ,				Surface (F7)		Other (Explain in Remarks)
	ly Mucky Mineral (S	,		 '	c Depress	` ,		
	y widcky willeral (S	')				oressions (F16)		ors of hydrophylic vegetation and hydrology must be present, unless
	m Mucky Peat or Pe	at (S2) (I R	RC H)			JI 63310113 (1 10 <i>)</i>	Wetland	i fiyuf ology filust be present, uffless
2.5 c	m Mucky Peat or Pea							ed or problematic.
2.5 c	m Mucky Peat or Pea Mucky Peat or Pea					3 of LRR H)		·
2.5 cm	-	t (S3) (LRR						·
2.5 cm	Mucky Peat or Pea	t (S3) (LRR						·
2.5 cm 5 cm	Mucky Peat or Pea	t (S3) (LRR					disturbe	·
2.5 cm 5 cm Restrictive I Type: Depth (inc	Mucky Peat or Pea	t (S3) (LRR					disturbe	ed or problematic.
2.5 cm 5 cm Restrictive I Type: Depth (inc	Mucky Peat or Pea	t (S3) (LRR					disturbe	ed or problematic.
2.5 cm 5 cm Restrictive I Type: Depth (inco	Mucky Peat or Pea	t (S3) (LRR					disturbe	ed or problematic.
2.5 cm 5 cm Type: Depth (inc.) Remarks:	Mucky Peat or Pea Layer: (if observed) ches):	t (S3) (LRR					disturbe	ed or problematic.
2.5 cm 5 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG	Mucky Peat or Pea Layer: (if observed) ches): Y drology Indicators.	t (S3) (LRR	F)	(MLI		B of LRR H)	Hydric So	il Present? Yes No X
2.5 cm 5 cm Restrictive I Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic	Mucky Peat or Pea Layer: (if observed) ches): GY drology Indicators: cators (minimum of cators)	t (S3) (LRR	F)	(MLI	RA 72 & 73	B of LRR H)	Hydric So	il Present? Yes No X
2.5 cm 5 cm Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	Mucky Peat or Pea Layer: (if observed) ches): drology Indicators cators (minimum of o	t (S3) (LRR	F)	(MLi at apply) Salt Crust ((B11)	S of LRR H)	Hydric So	il Present? Yes No X
2.5 cm 5 cm Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	Mucky Peat or Peat Layer: (if observed) ches): drology Indicators cators (minimum of once Water (A1) Water Table (A2)	t (S3) (LRR	F)	at apply) Salt Crust (Aquatic Fau	(B11) una (B13)	S of LRR H)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
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2.5 cm 5 cm 7 cm Restrictive I Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	Mucky Peat or Peat Layer: (if observed) ches): drology Indicators: cators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2)	t (S3) (LRR	F)	at apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor	(B11) una (B13) Sulfide Od n Water T	S of LRR H) Solor (C1)	Hydric So	il Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
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2.5 cm 5 cm Restrictive I Type: Depth (ince Remarks: HYDROLOG Wetland Hyd Primary Indice Surfa High Satur Wate Sedir Drift I Algal Iron I Inunce	Mucky Peat or Pea Layer: (if observed) ches): GY drology Indicators: cators (minimum of ace Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aei	t (S3) (LRR	red; check all the	at apply) Salt Crust (Aquatic Fat Hydrogen S Dry-Seasor Oxidized Rhiz (where not	(B11) una (B13) Sulfide Od n Water T zospheres t tilled) of Reducee Surface ((S of LRR H) Solor (C1) Solor (C2) Solor Living Roots (C3) d Iron (C4) C7)	Hydric So	il Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3) Geomorphic Position (D2) FAC-Neutral Test (D5)
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2.5 cm 5 cm 7 cm Restrictive I Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate Field Observ Surface Wate Water Table	Mucky Peat or Pea Layer: (if observed) Ches): Gradiology Indicators: Cators (minimum of observed) Water (A1) Water Table (A2) Per Marks (B1) Ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aei Gradions: er Present?	t (S3) (LRR	red; check all the	at apply) Salt Crust (Aquatic Fau Hydrogen S Dry-Seasor Oxidized Rhiz (where not Presence of Thin Muck Other (Expl	(B11) una (B13) Sulfide Od n Water T zospheres t tilled) of Reduced Surface (Calculus and In Reduced Lain in Reduced	S of LRR H) Solor (C1) Solor (C2) Son Living Roots (C3) d Iron (C4) C7) marks)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Deter	mination Da	ata Forn	n - Grea	at Plains Reg	jion		
Project/Site: I-25/I-80 Interchange	City/	County: Ch	eyenne/La	aramie	Sampling D	ate: 8/	/1/2019
Applicant/Owner: Wyoming Dept. of Transporta				State: WY	_		S-74
Investigator(s): R. Newton, D. Soucy				Sectio	_ n, Township, Range		R67W
Landform (hillslope, terrace, etc.): depression	Lo	cal Relief (c	oncave, co	onvex, none):	concave	Slope	(%): 0-1
Subregion (LRR): G - Western Great Plains	Lat.	2238	887.6331	Long:	742056.931	Datu	m: WYE
Soil Map Unit Name: Urban land-Merden complex, 0	to 3 percent slope	s			NWI Classification:	_ ,	JPL
Are climatic/hydrologic conditions on the site typical for	this time of year?	Ye:	s X	No (If no, explain in Rei	marks)	
Are Vegetation , Soil , or Hydrology	significantly	disturbed?	Are "Norma	al Circumstance	s" present? Yes)	X No
Are Vegetation , Soil , or Hydrology	naturally pro				xplain any answers		
SUMMARY OF FINDINGS - Attach site map showing			rancocte	,		iii i komanko.	•)
		iocations, t	ransects,	important leate	1165, 616.		
<u> </u>		la tha Ca				V V I	M-
Hydric Soil Present? Yes X No		is the Sa	ampied Are	ea within a Wetla	and?	Yes X N	No
Wetland Hydrology Present? Yes X No							
Remarks:							
Depressional palustrine scrub-shrub wetland PSS-3 in	on/off-ramp island	•					
VEGETATION - Use scientific names of plants.			Domino	nce Test Works	a baati		
Absolut Tree Stratum (Plot size: 30x30 ft) % Cove		Indicator Status		of Dominant Sp			
1.	·			OBL, FACW, o		2	(A)
2.			(excludii	ng FAC-):			 ` ′
3.			Total Nu	ımber of Domina	int		
4.				Across All Strat		2	(B)
5.							
	= Total Cover		Porcont	of Dominant Sp	ocios		
Sapling/Shrub Stratum (Plot size: 15x15 ft)				e OBL, FACW, o		100%	6 (A/B)
1. Salix exigua 80	Υ	FACW					```
2.			Prevale	nce Index Work	sheet:		
3.				Total % Cover	of:	Multi	ply by:
4.			OBL	species	15	x 1 =	15
5.			FACW	species	165	x 2 =	330
80	= Total Cover		FAC	species	0	x 3 =	0
Herb Stratum (Plot size: 5x5 ft)			FACU	species	0	x 4 =	0
1. Juncus balticus 85	Y	FACW	UPL	species	0	x 5 =	0
2. Carex hystericina 15	N	OBL	Column	Totals:	180	(A)	345 (B)
3.				Preva	alence Index = B/A	= 1.9)
4.			Hydrop	hytic Vegetatio	n Indicators:		
5				X 1. Rapid T	est for Hydrophytic	Vegetation	
6					nce Test is >50%.		
7					nce Index is <3.01		
8					logical Adaptations¹		
9	_				ta in Remarks or on		
10.				Problemat	ic Hydrophytic Vege	etation (Expl	ain)
100	= Total Cover						
Woody Vine Stratum (Plot size: 30x30 ft)							
1	_			¹ Indicators of hyd	fric soil and wetland h	nydrology mu	st be
2				present, unless d	isturbed or problema	tic.	
0	= Total Cove	er					
% Bare Ground in Herb Stratum 0 %				Hydrophytic Veg	etation Present?	X_Ye	es No
Remarks:		·	_				

	Matrix			Redox Fe	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-11	10 YR 2/1	100					sandy clay	
11-16	10 YR 5/2	85	10 YR 5/8	15	С	M	clay	
¹ Type: C=Co	oncentration, D=Dep	oletion, RM=	Reduced Matrix,	CS=Cover	ed or Co	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil I								ors for Problematic Hydric Soils ³ :
_	sol (A1)			Sandy	Gleyed N	Matrix (S4)		cm Muck (A9) (LRR I, J)
	Epipedon (A2)		-		Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		-		ed Matrix	•		Park Surface (S7) (LRR G)
	ogen Sulfide (A4)		-			Mineral (F1)		ligh Plains Depressions (F16)
	fied Layers (A5) (LF	RR F)	-		-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	,	-		ed Matrix		R	educed Vertic (F18)
	eted Below Dark Sui		-			rface (F6)		ed Parent Material (TF2)
	Dark Surface (A12		-			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S	,	-			ions (F8)		ors of hydrophylic vegetation and
	n Mucky Peat or Pe	•	R G, H)			oressions (F16)		hydrology must be present, unless
	-					of LRR H)	disturbe	d or problematic.
5 cm	Mucky Peat or Pea	ι (33) (LRR	· • <i>)</i>	(
				(
Restrictive L	ayer: (if observed)			(,		
Restrictive L	_ayer: (if observed)			(<u> </u>	Undrin So	il Propont? Voc V No
Restrictive L	_ayer: (if observed)			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		ŕ	Hydric So	il Present? Yes X No
Restrictive L	_ayer: (if observed)			\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		· · · · · · · · · · · · · · · · · · ·	Hydric So	il Present? Yes X No
Restrictive L Type: Depth (inc	_ayer: (if observed)					<u> </u>	Hydric So	il Present? Yes X No
Restrictive L Type: Depth (inc	.ayer: (if observed) hes):					í.	Hydric So	i l Present? Yes X No
Restrictive L Type: Depth (inc Remarks:	.ayer: (if observed) hes):						Hydric So	il Present? Yes X No
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd	_ayer: (if observed) hes):							il Present? Yes X No
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyc Primary Indic	Ayer: (if observed) hes): Y drology Indicators:		red; check all tha					
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of o		red; check all tha	t apply)	B11)	S		rs (minimum of two required)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyc Primary Indic Surfa High	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of o		red; check all tha	<i>t apply)</i> Salt Crust (I	311) ina (B13)	S		rs (<i>minimum of two required</i>) Surface Soil Cracks (B6)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1)) Water Table (A2)		red; check all tha	<i>t apply)</i> Salt Crust (I Aquatic Fau	311) ina (B13) ulfide Od	Sor (C1)		rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Auger: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3)		red; check all tha	<i>t apply)</i> Salt Crust (I Aquatic Fau Hydrogen S Dry-Season	B11) ina (B13) ulfide Od Water T	Sor (C1)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyc Primary Indic Surfa High Satur Wate Sedin	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)		red; check all tha	<i>t apply)</i> Salt Crust (I Aquatic Fau Hydrogen S Dry-Season	B11) Ina (B13) ulfide Od Water T	Sor (C1) able (C2)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyo Primary Indic Surfa High Satur Wate Sedin Drift I	Auger: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2)		red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Ory-Season Oxidized Rhiz	B11) una (B13) ulfide Od Water T cospheres tilled)	or (C1) able (C2) on Living Roots (C3)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indio Surfa High Satur Wate Sedin Drift I Algal	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of of other cathered) water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3)		red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz	B11) una (B13) ulfide Od Water T cospheres tilled) f Reduce	lor (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyc Primary Indic Surfa High Satur Wate Sedin Drift [Algal Iron [Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)	one is requi	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not	B11) Ina (B13) Ilfide Od Water T Tospheres tilled) f Reduce Surface (6	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Secondary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyc Primary Indic Surfa High ' Satur Wate Sedin Drift [Algal Iron E Inund	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	one is requi	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of	B11) Ina (B13) Ilfide Od Water T Tospheres tilled) f Reduce Surface (6	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Secondary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyc Primary Indic Surfa High Satur Wate Sedin Drift [Algal Iron [Inund	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer r-Stained Leaves (E	one is requi	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of	B11) Ina (B13) Ilfide Od Water T Tospheres tilled) f Reduce Surface (6	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Secondary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: Depth (inc Remarks: HYDROLOG Wetland Hyc Primary Indic Surfa High ' Satur Wate Sedin Drift [Algal Iron E Inund Wate	Ayer: (if observed) Ayer: (if observed) Arology Indicators: Ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aer r-Stained Leaves (E	one is requi	red; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S Dther (Expla	B11) Ina (B13) Ilfide Od Water T Tospheres tilled) f Reduce Surface (6	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	Secondary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C8) Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indio Surfa High Satur Wate Sedin Drift I Algal Iron I Inund Wate Field Observ	Ayer: (if observed) Arology Indicators: Eators (minimum of of other community of other c	one is requi	red; check all tha	f apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S Dther (Expla	B11) Ina (B13) Ilfide Od Water T Tospheres tilled) f Reduce Surface (fain in Ref	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Secondary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determina	tion Da	ta Form	ı - Grea	at Plains Re	egion	
Project/Site: I-25/I-80 Interchange		City/0	County: Che	yenne/La	aramie	Sampling Date	8/1/2019
Applicant/Owner: Wyoming Dept. of To	ansportation				State: W	Y Sampling Point	:: S-75
Investigator(s): R. Newton, D. Soucy					Secti	on, Township, Range: <u></u>	311 T13N R67W
Landform (hillslope, terrace, etc.): minor	terrace	Loc	al Relief (co	ncave, co	onvex, none):	none	Slope (%): 0-1
Subregion (LRR): G - Western Great Plant	ains	Lat.	2238	96.6568	Long:	742073.2764	Datum: WY E
Soil Map Unit Name: Urban land-Merden co	omplex, 0 to 3 per	rcent slopes	3			NWI Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for this tim	ne of year?	Yes	Х	No	(If no, explain in Rema	rks)
Are Vegetation, Soil, or H	ydrologysi	gnificantly o	listurbed? A	re "Norma	al Circumstanc	es" present? Yes	X No
Are Vegetation , Soil , or H	ydrology na	aturally prob	olematic?		(If needed,	explain any answers in	Remarks.)
SUMMARY OF FINDINGS - Attach site map	showing samp	ling point le	ocations, tr	ansects,	important fea	tures, etc.	
Hydrophytic Vegetation Present? Yes	No X				-		
Hydric Soil Present? Yes	No X		Is the Sa	mpled Are	ea within a Wet	tland? Ye	s No X
Wetland Hydrology Present? Yes	No X						
Remarks:	<u> </u>						
Paired upland point for PSS-3.							
VEGETATION - Use scientific names of pla	ants.						
	Absolute D	ominant	Indicator	Domina	nce Test Worl	ksheet:	
<u>Tree Stratum</u> (Plot size: 30x30 ft)	% Cover S	Species?	Status	Number	of Dominant S	pecies	
1					OBL, FACW,	or FAC:	0 (A)
2				(exclual)	ng FAC-):		
3				Total Nu	ımber of Domir	nant	
4				Species	Across All Stra	ata:	1 (B)
5							
Sapling/Shrub Stratum (Plot size: 15x	0 = To (15 ft)	otal Cover			of Dominant S OBL, FACW,	•	0% (A/B)
1				Provalo	nce Index Wo	rkshoot:	
3.				rievale	Total % Cove		Multiply by:
4				OBL	species	0 x	
5					species	15 x 2	
·	0 = To	tal Cover		FAC	species	0 x3	
Herb Stratum (Plot size: 5x5 ft)					species	17 x	
1. Euphorbia esula	68	Υ	NI	UPL	species	68 x 5	
2. Juncus balticus	15	N	FACW	Column	•		A) 438 (B)
3. Elymus repens	17	N -	FACU			valence Index = B/A =	4.4
4.				Hydrop	hytic Vegetation	on Indicators:	
5.				' '	-	Test for Hydrophytic Ve	getation
6.						ance Test is >50%.	
7.					3. Preval	ence Index is ≤3.01	
8.					4. Morph	ological Adaptations¹ (P	rovide sup-
9.					porting d	ata in Remarks or on a	separate sheet)
0.					Problema	atic Hydrophytic Vegeta	tion (Explain)
	100 = To	tal Cover					
Woody Vine Stratum (Plot size: 30x30	ft)						
1.					¹ Indicators of h	ydric soil and wetland hyd	rology must be
2.						disturbed or problematic.	5,
	0 =	Total Cove	r				
% Bare Ground in Herb Stratum	0 %				Hydrophytic Ve	getation Present?	Yes X No
Remarks:				<u> </u>			
Species with no indicator (NI) are treated as	UPL for this analy	/sis.					

<i>(</i> ' ' ' ' '	Matrix			Redox Fe	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	10 YR 2/1	100					sandy clay	
7-18	10 YR 7/4	100					clay	
	e: C=Concentration, D=Depletion, RM=Rec							
¹ Type: C=Co	oncentration, D=Dep	oletion, RM=	Reduced Matrix,	CS=Cover	ed or Coa	ited Sand Grains.	² Location: PL	=Pore Lining, M=Matrix
Hydric Soil I	•		<u> </u>					tors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandy	Gleyed N	latrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		Redox (S		-	Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)				d Matrix	•	-	Dark Surface (S7) (LRR G)
	gen Sulfide (A4)		_			lineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LF	RR F)	_		-	лаtrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	,			ed Matrix			Reduced Vertic (F18)
	ted Below Dark Sur					face (F6)		Red Parent Material (TF2)
	Dark Surface (A12)					Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S	,	_		Depressi	` '	3Indica	tors of hydrophylic vegetation and
	n Mucky Peat or Pe	•	— R G, H)			ressions (F16)		d hydrology must be present, unless
	Mucky Peat or Peat		_		A 72 & 73		disturb	ped or problematic.
3 (111								
	-							
Restrictive L	.ayer: (if observed)							
Restrictive L	.ayer: (if observed)						Hydrio C	nil Propent? Voc. No. V
Restrictive L	.ayer: (if observed)						Hydric So	pil Present? Yes No _X
Restrictive L	.ayer: (if observed)						Hydric So	oil Present? Yes No _X
Restrictive L Type: Depth (inc.	.ayer: (if observed)						Hydric S	oil Present? Yes No_X
Restrictive L Type: Depth (inc.	.ayer: (if observed) hes):						Hydric S	pil Present? Yes No X
Restrictive L Type: Depth (inc. Remarks:	.ayer: (if observed) hes):						Hydric S	Dil Present? Yes No _X
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc	.ayer: (if observed) hes):		ed; check all that	apply)		s		oil Present? Yes No X
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic	Ayer: (if observed) hes): Y Irology Indicators:			apply) alt Crust (E	311)	S		
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyd Primary Indic	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of o		s	,	•	S		ors (minimum of two required)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of o		s a	alt Crust (E	na (B13)			ors (minimum of two required) Surface Soil Cracks (B6)
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2)		s a H	alt Crust (E quatic Fau	na (B13) ulfide Od	or (C1)		ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyo Primary Indic Surfac High V Satura Water	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of occewater (A1) Water Table (A2) ation (A3)		s a b	alt Crust (E quatic Fau ydrogen S ry-Season	na (B13) ulfide Od Water Ta	or (C1)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)		S H D	alt Crust (E quatic Fau ydrogen S ry-Season	na (B13) ulfide Od Water Ta ospheres o	or (C1) able (C2)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High V Satura Watel Sedin Drift D	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2)		S A H O (v	alt Crust (I quatic Fau ydrogen S ry-Season xidized Rhiz vhere not	na (B13) ulfide Od Water Ta ospheres o	or (C1) able (C2)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satur: Water Sedin Drift E Algal	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)		S H D (v	alt Crust (I quatic Fau ydrogen S ry-Season xidized Rhiz vhere not	na (B13) ulfide Od Water Ta ospheres o tilled)	or (C1) able (C2) on Living Roots (C3)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Saturar Water Sedin Drift E Algal Iron D	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)	one is require	S H O (v	alt Crust (Equatic Fau ydrogen S ry-Season xidized Rhiz vhere not resence of	na (B13) ulfide Od Water Ta ospheres o tilled) Reduceo Surface (C	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift E Algal Iron E Inund	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	one is require	S H O (v	alt Crust (Equatic Fau ydrogen S ry-Season xidized Rhiz where not resence of hin Muck S	na (B13) ulfide Od Water Ta ospheres o tilled) Reduceo Surface (C	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift E Algal Iron E Inund	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of observed) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aer r-Stained Leaves (E	one is require	S H O (v	alt Crust (Equatic Fau ydrogen S ry-Season xidized Rhiz where not resence of hin Muck S	na (B13) ulfide Od Water Ta ospheres o tilled) Reduceo Surface (C	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift E Algal Iron E Inund Water	Ayer: (if observed) Ayer: (if observed) Area of the served of the serv	one is require	S H O (v	alt Crust (Equatic Fau ydrogen S ry-Season xidized Rhiz where not resence of hin Muck S ther (Expla	na (B13) ulfide Od Water Ta ospheres o tilled) Reduceo Gurface (C	or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Water Sedin Drift E Algal Iron E Inund Water Field Observ	Ayer: (if observed) hes): Y Irology Indicators: ators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) hent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aer r-Stained Leaves (Exations: er Present?	one is require	S — S — H — D — O (v — P — T — O — O — O — O — O — O — O — O — O	alt Crust (Equatic Fau ydrogen S ry-Season xidized Rhiz where not resence of hin Muck S ther (Expla	na (B13) ulfide Od Water Ta ospheres o tilled) Reduceo Surface (C ain in Rer	or (C1) able (C2) on Living Roots (C3) I Iron (C4) C7) narks)	econdary Indicat	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determin	nation Da	ata Forn	n - Gre	at Plains Reg	gion		
Project/Site: I-25/I-80 Interchange		City	/County: Ch	eyenne/L	aramie	Sampling D	ate: 8/	/1/2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation				State: W	Y Sampling Po	oint:	S-76
Investigator(s): R. Newton, D. Soucy					Section	on, Township, Range	e: S11 T13N	R67W
Landform (hillslope, terrace, etc.): depres	ssion	Lo	cal Relief (co	oncave, c	onvex, none):	concave	Slope	(%): <u>0-1</u>
Subregion (LRR): G - Western Great Pla	ains	Lat	. 2239	900.5793	Long:	742108.028	Datur	m: WY E
Soil Map Unit Name: <u>Urban land-Merden co</u>	emplex, 0 to 3	percent slope	es			NWI Classification:		JPL
Are climatic/hydrologic conditions on the site	typical for this	time of year?	? Yes	s <u>X</u>	No	(If no, explain in Re	marks)	
Are Vegetation , Soil , or Hy	/drology	significantly	disturbed? A	Are "Norm	al Circumstance	es" present? Yes	>	X No
Are Vegetation , Soil , or Hy	/drology	naturally pro	oblematic?		(If needed, e	explain any answers	in Remarks.	<u> </u>
SUMMARY OF FINDINGS - Attach site map		- ''		ransects.	important feat	ures, etc.		,
	X No		,		•	·		
`	X No		Is the Sa	ampled Ar	ea within a Wetla	and?	Yes X N	No
_ _	X No	_					· · · · · · · · · · · · · · · · · · ·	·-
vvetiana riyarology i resent:		_						
Remarks:								
Depressional palustrine emergent wetland PE		f-ramp island.						
VEGETATION - Use scientific names of pla	ınts.			1				
Tree Stratum (Plot size: 30x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status		ance Test Works of Dominant Sp			
1	% Cover	Species?	Status		e OBL, FACW, c		2	(4)
2					ing FAC-):	717.0.		(A)
3.				T - 4 - 1 N 1				
4.					umber of Domina Across All Strat		2	(B)
5.				Орослос				
Sapling/Shrub Stratum (Plot size: 15x	0 = 15 ft)	Total Cover			of Dominant Sp e OBL, FACW, c		100%	(A/B)
2.				Prevale	ence Index Worl	ksheet:		
3.					Total % Cove	r of:	Multip	ply by:
4				OBL	species	10	x 1 =	10
5				FACW	species	65	x 2 =	130
	0 =	Total Cover		FAC	species	0	x 3 =	0
Herb Stratum (Plot size: 5x5 ft)				FACU	•	0	x 4 =	0
Agrostis stolonifera	25	<u> </u>	FACW	UPL	species		<u>x</u> 5 =	0
2. Juncus torreyi	40	Y	FACW	Column		75	_(A)	140 (B)
3. Juncus nodosus	10	N	OBL	ļ		alence Index = B/A	= 1.9)
4				Hydrop	hytic Vegetatio		.,	
5						Test for Hydrophytic	Vegetation	
6.						ance Test is >50%. ence Index is <3.01		
7						ence index is <u><</u> 3.01 plogical Adaptations ¹	l (Provide su	ın-
8					•	ita in Remarks or on	•	•
9								
10	75 =	Total Cover			FIUDIEIIIAI	tic Hydrophytic Vege	ειαιι∪π (⊏χρι	aiii)
Woody Vine Stratum (Plot size: 30x30		Total Gover						
1	'''				1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ا المحالم من المحال معالم		-4
2.						dric soil and wetland h listurbed or problema		sr ne
	0	= Total Cov	 er		p. cociii, dilicoo d			
% Bare Ground in Herb Stratum 2	25 %	. 5.41 600	=-		Hydrophytic Veg	getation Present?	X_Ye	es <u> </u>
Remarks:								

	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10 YR 3/1	100					clay	
2-16	10 YR 6/2	97	7.5 YR 5/8	3	С	M	clay	
						· ' <u></u>		
¹ Type: C=Co	oncentration, D=Dep	oletion. RM:	=Reduced Matrix	CS=Cover	red or Co	ated Sand Grains	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil								ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandv	Gleved I	Matrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		Redox (Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		-		ed Matrix	•		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)		-			Mineral (F1)		High Plains Depressions (F16)
	ified Layers (A5) (LF	DD E\	-		•	Matrix (F2)	'	(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	,	-	X Deplet	-		,	Reduced Vertic (F18)
	eted Below Dark Su		-			rface (F6)		Red Parent Material (TF2)
	Dark Surface (A12	` ,	-			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S	•	-			sions (F8)		
	m Mucky Peat or Pe	•	'R G H)			pressions (F16)		tors of hydrophylic vegetation and dhydrology must be present, unless
250		Jat (02) (LIX	0, 11)	IIIgIII	iaii is Del			ed or problematic.
	-	t (S3) (I RR	F)	(MIE	RA 72 & 73	R of IRR H	uistui b	ed of problematic.
	Mucky Peat or Pea	t (S3) (LRR	F)	(MLF	RA 72 & 73	3 of LRR H)	uistui b	ed of problematic.
5 cm	-		F)	(MLF	RA 72 & 73	3 of LRR H)	uistarb	ed of problematic.
5 cm	Mucky Peat or Pea		F)	(MLF	RA 72 & 73	3 of LRR H)	disturb	ed of problematic.
5 cm	Mucky Peat or Pea		F)	(MLF	RA 72 & 73	3 of LRR H)		oil Present? Yes X No
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Pea		F)	(MLF	RA 72 & 73	3 of LRR H)		
5 cm Restrictive I Type: Depth (inc	Mucky Peat or Pea		F)	(MLF	RA 72 & 73	3 of LRR H)		
5 cm Restrictive I Type: Depth (incompress) Remarks:	Mucky Peat or Pea		F)	(MLF	RA 72 & 73	3 of LRR H)		
5 cm Restrictive I Type: Depth (inc) Remarks:	Mucky Peat or Pea Layer: (if observed) ches):		F)	(MLF	RA 72 & 73	3 of LRR H)		
Restrictive I Type: Depth (inco Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Pea Layer: (if observed) ches): Y drology Indicators:				RA 72 & 73		Hydric So	vil Present? Yes X No
Femarks: 5 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic	Mucky Peat or Pea Layer: (if observed) ches): GY drology Indicators: cators (minimum of company)		red; check all that	t apply)			Hydric So	ors (minimum of two required)
Frimary Indices	Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of o		red; check all that	<i>t apply)</i> Salt Crust (l	B11)	S	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6)
Femarks: HYDROLOG Wetland Hyd Surfa High	Mucky Peat or Pear Layer: (if observed) ches): drology Indicators: cators (minimum of observed) water (A1) Water Table (A2)		red; check all that	t <i>apply)</i> Salt Crust (l Aquatic Fau	B11) una (B13)	s	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Mucky Peat or Pear Layer: (if observed) ches): drology Indicators: cators (minimum of object Water (A1) Water Table (A2) ration (A3)		red; check all that	t apply) Salt Crust (l Aquatic Fau	B11) una (B13) Sulfide Oc	S dor (C1)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Mucky Peat or Pear Layer: (if observed) Ches): GY drology Indicators: cators (minimum of of other (A1)) Water Table (A2) ration (A3) or Marks (B1)		red; check all that	<i>t apply)</i> Salt Crust (l Aquatic Fau Hydrogen S Dry-Season	B11) una (B13) Sulfide Od n Water T	S dor (C1) able (C2)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	Mucky Peat or Pear Layer: (if observed) ches): drology Indicators: cators (minimum of object Water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2)		red; check all that	t apply) Salt Crust (l Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz	B11) una (B13) Sulfide Oc n Water T zospheres	S dor (C1)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I	Mucky Peat or Pear Layer: (if observed) ches): drology Indicators: cators (minimum of object (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3)		red; check all that X S	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz	B11) una (B13) Sulfide Od n Water T zospheres	S dor (C1) fable (C2) on Living Roots (C3)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	Mucky Peat or Pear Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of of other other of other other of other other of other othe		red; check all that X S B X C	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not	B11) Juna (B13) Sulfide Och Mater Togospheres Stilled) If Reduce	Solor (C1) Table (C2) on Living Roots (C3) d Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I	Mucky Peat or Pea Layer: (if observed) Ches): Grading Indicators: Cators (minimum of observed) Water (A1) Water Table (A2) Cation (A3) Or Marks (B1) Chenotic (B3) Mat or Crust (B4) Deposits (B5)	: one is requi	red; check all that	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence o	B11) una (B13) Sulfide Oc n Water T zospheres itilled) of Reduce Surface (Solution (C1) Sable (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Femarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Pear Layer: (if observed) ches): drology Indicators: cators (minimum of observed) water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer	: one is requi	red; check all that	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not	B11) una (B13) Sulfide Oc n Water T zospheres itilled) of Reduce Surface (Solution (C1) Sable (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	Mucky Peat or Pear Layer: (if observed) ches): GY drology Indicators: cators (minimum of observed) water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer er-Stained Leaves (E	: one is requi	red; check all that	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence o	B11) una (B13) Sulfide Oc n Water T zospheres itilled) of Reduce Surface (Solution (C1) Sable (C2) on Living Roots (C3) d Iron (C4) C7)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate	Mucky Peat or Pear Layer: (if observed) Ches): GY drology Indicators: Cators (minimum of of other other of other other of other other other other other of other o	: one is requi	red; check all that X S Y X S Y (B7)	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz Where not Presence of Thin Muck S Dther (Expl	B11) Juna (B13) Sulfide Oc Nater T Zospheres Stilled) of Reduce Surface (Gain in Red	dor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron [Inunc Wate Still Obsert Surface Wate	Mucky Peat or Pea Layer: (if observed) Ches): Gradiology Indicators: Cators (minimum of observed) Water (A1) Water Table (A2) Cation (A3) Per Marks (B1) Cation (A3) Mat or Crust (B4) Coeposits (B3) Mat or Crust (B4) Coeposits (B5) dation Visible on Aer Carter-Stained Leaves (Example) Vations: er Present?	: one is requi	red; check all that X	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz where not Presence of Thin Muck S Dther (Expl	B11) una (B13) Sulfide Oct n Water T zospheres itilled) of Reduce Surface (itiliain in Rei	Solution (C1) Sable (C2) On Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate Field Obser Surface Wate Water Table	Mucky Peat or Pea Layer: (if observed) Ches): Gradiology Indicators: Cators (minimum of observed) Water (A1) Water Table (A2) Cation (A3) Per Marks (B1) Cation (A3) Mat or Crust (B4) Coeposits (B3) Mat or Crust (B4) Coeposits (B5) dation Visible on Aer Carter-Stained Leaves (Example) Vations: er Present?	: one is requi rial Imagery 39)	red; check all that X S X S X ((B7) Yes Yes	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz Where not Presence of Thin Muck S Dther (Expl.	B11) Juna (B13) Sulfide Oc Nater T Zospheres Stilled) of Reduce Surface (Gain in Red	dor (C1) Table (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determinatio	n Data Forr	n - Great Plains Regio	on	
Project/Site: I-25/I-80 Interchange		City/County: Ch	eyenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation		State: WY	Sampling Point:	S-77
Investigator(s): R. Newton, D. Soucy			Section,	Township, Range: S11	T13N R67W
Landform (hillslope, terrace, etc.): minor	terrace	Local Relief (c	oncave, convex, none):	none	Slope (%): 0-1
Subregion (LRR): G - Western Great Pla	ains	Lat. 223	911.6247 Long:	742096.9543	Datum: WYE
Soil Map Unit Name: Urban land-Merden co	mplex, 0 to 3 percen	t slopes	NW	/I Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for this time of	f year? Ye	s X No (If i	no, explain in Remarks)
Are Vegetation , Soil , or Hy	drology signifi	cantly disturbed?	Are "Normal Circumstances"	present? Yes	X No
Are Vegetation , Soil , or Hy		ally problematic?		Iain any answers in Rei	
SUMMARY OF FINDINGS - Attach site map					marko.)
-		point locations,	iransecis, important leature	5, 616.	
Hydrophytic Vegetation Present? Yes	No_X				
Hydric Soil Present? Yes _	No X	Is the S	ampled Area within a Wetland	d? Yes_	No_X_
Wetland Hydrology Present? Yes _	No_X_				
Remarks:					
Paired upland point for PEM-25.					
VEGETATION - Use scientific names of pla	ints.		<u> </u>		
Tree Stratum (Plot size: 30x30 ft)	Absolute Domir % Cover Speci		Dominance Test Worksho Number of Dominant Speci		
1	70 GOVEI - OPEGI	co: Olalus	That Are OBL, FACW, or F		0 (A)
2			(excluding FAC-):		(A)
3			Total Number of Dominant		
4			Species Across All Strata:		1 (B)
5.					. (5)
·	0 = Total 0	Cover	Developed of Developed Constitution		
Sapling/Shrub Stratum (Plot size: 15x	15 ft)		Percent of Dominant Speci That Are OBL, FACW, or F		0% (A/B)
1	,				(1,15)
2			Prevalence Index Worksh	neet:	
3.			Total % Cover o		Multiply by:
4.			OBL species	0 x 1 =	0
5.			FACW species	17 x 2 =	34
·	0 = Total 0	Cover	FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)			FACU species	0 x 4 =	0
1. Juncus balticus	12 N	FACW	UPL species	83 x 5 =	415
2. Euphorbia esula	83 Y		Column Totals:	100 (A)	449 (B)
3. Agrostis stolonifera	5 N			nce Index = B/A =	4.5
4.			Hydrophytic Vegetation II	ndicators:	
5.				t for Hydrophytic Veget	ation
6.				e Test is >50%.	
7.			3. Prevalence	e Index is <3.01	
8.			4. Morpholog	jical Adaptations¹ (Prov	ide sup-
9.			porting data i	in Remarks or on a sep	arate sheet)
0.		_	Problematic	Hydrophytic Vegetation	ı (Explain)
	100 = Total 0	Cover			
Woody Vine Stratum (Plot size: 30x30	ft)				
1			¹ Indicators of hydric	soil and wetland hydrolo	gy must be
2.				urbed or problematic.	
	0 = Tota	al Cover			
% Bare Ground in Herb Stratum	0 %		Hydrophytic Vegeta	ation Present?	Yes X No
_				_	_
Remarks:			•		
Species with no indicator (NI) are treated as I	JPL for this analysis.				

Depth	Matrix			Redox Fe	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	10 YR 2/1	100					sandy clay	
8-18	10 YR 7/4	100					clay	
	e: C=Concentration, D=Depletion, RM=Rec							
			_					
¹ Type: C=Co	oncentration. D=Der	oletion. RM=F	Reduced Matrix.	CS=Cover	ed or Coa	ated Sand Grains.	² Location: PL	=Pore Lining, M=Matrix
Hydric Soil I	•	,	,					tors for Problematic Hydric Soils ³ :
•	sol (A1)			Sandv	Gleved M	latrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		_		ed Matrix	,		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)		_			lineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LF	RR F)	_		-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F ,	,	_		ed Matrix			Reduced Vertic (F18)
	eted Below Dark Sur		_		Dark Sur	,		Red Parent Material (TF2)
	Dark Surface (A12)		_			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S	,	_		Depressi	` '		ators of hydrophylic vegetation and
	, ,	•				ressions (F16)		nd hydrology must be present, unless
	m Mucky Peat or Pe	eat (S2) (LRF	RG, H)	HIMITI				
2.5 cr	m Mucky Peat or Pe Mucky Peat or Pea		_		' RA 72 & 73	of LRR H)	disturb	ped or problematic.
2.5 cm	Mucky Peat or Pea		_			of LRR H)	disturk	
2.5 cm 5 cm Restrictive L	-		_			of LRR H)	disturb	
2.5 cm 5 cm Restrictive L Type:	Mucky Peat or Peat _ayer: (if observed)		_			of LRR H)		ped or problematic.
2.5 cm 5 cm	Mucky Peat or Peat _ayer: (if observed)		_			of LRR H)		
2.5 cm 5 cm Restrictive L	Mucky Peat or Peat _ayer: (if observed)		_			of LRR H)		ped or problematic.
2.5 cm 5 cm Restrictive L Type: Depth (inc.)	Mucky Peat or Peat _ayer: (if observed)		_			of LRR H)		ped or problematic.
2.5 cm 5 cm Restrictive L Type: Depth (inc.)	Mucky Peat or Peat ayer: (if observed) hes):		_			of LRR H)		ped or problematic.
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks:	Mucky Peat or Peat ayer: (if observed) hes):	t (S3) (LRR F	_			of LRR H)		ped or problematic.
2.5 cm 5 cm Type: Depth (inc. Remarks: HYDROLOG Wetland Hyd	Mucky Peat or Peat ayer: (if observed) hes):	t (S3) (LRR F		(MLR			Hydric So	ped or problematic.
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic	Mucky Peat or Peat Layer: (if observed) hes): Y drology Indicators:	t (S3) (LRR F	ed; check all that	(MLR	RA 72 & 73		Hydric So	oil Present? Yes No X
2.5 cm 5 cm 7 cm Restrictive L Type: _ Depth (inc. Remarks: HYDROLOG Wetland Hyd Primary Indic Surface	Mucky Peat or Peat Layer: (if observed) thes): Y drology Indicators: eators (minimum of o	t (S3) (LRR F	ed; check all that	(MLR	RA 72 & 73		Hydric So	oil Present? Yes No X ors (minimum of two required)
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High	Mucky Peat or Peat Layer: (if observed) thes): Y drology Indicators: cators (minimum of oce Water (A1)	t (S3) (LRR F	ed; check all that	(MLR apply)	B11) Ina (B13)	S	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6)
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2)	t (S3) (LRR F	ed; check all that	apply) Salt Crust (I	B11) una (B13)	S or (C1)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
2.5 cm 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High Satura Watel	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of occertifications) Water Table (A2) Eation (A3)	t (S3) (LRR F	ed; check all that	apply) Salt Crust (I Aquatic Fau Hydrogen S	B11) una (B13) ulfide Od	S or (C1)	Hydric So	oil Present? Yes No X ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
2.5 cm 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Watel Sedin	Mucky Peat or Peat Layer: (if observed) hes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)	t (S3) (LRR F	ed; check all that	apply) Salt Crust (I Aquatic Fau Hydrogen S	B11) una (B13) ulfide Ode Water Ta	or (C1) able (C2)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Watel Sedin Drift D	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Cators (minimum of occert (A1) Water Table (A2) Cation (A3) r Marks (B1) ment Deposits (B2)	t (S3) (LRR F	ed; check all that	apply) Salt Crust (I Aquatic Fau Hydrogen S Ory-Season	B11) Ina (B13) Sulfide Ode Water Ta	or (C1) able (C2) on Living Roots (C3)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
2.5 cm 5 cm Restrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift I	Mucky Peat or Peat Layer: (if observed) hes): Y drology Indicators: cators (minimum of occert (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3)	t (S3) (LRR F	ed; check all that	apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz	B11) una (B13) ulfide Ode Water Ta	or (C1) hable (C2) on Living Roots (C3)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satur: Water Sedin Drift [Algal Iron D	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Cators (minimum of oce Water (A1) Water Table (A2) Cation (A3) r Marks (B1) Chenent Deposits (B2) Deposits (B3) Mat or Crust (B4)	t (S3) (LRR F	ed; check all that	apply) Salt Crust (I Aquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not	B11) Ina (B13) Iulfide Ode Water Ta cospheres of tilled) f Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Watel Sedin Drift D Algal Iron D	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of of ce Water (A1) Water Table (A2) Lation (A3) If Marks (B1) Linent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	one is require	ed; check all that	apply) Salt Crust (I Aquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not Presence of	B11) Ina (B13) Iulfide Ode Water Ta cospheres of tilled) f Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Watel Sedin Drift D Algal Iron D	Mucky Peat or Peat Layer: (if observed) Arology Indicators: Lators (minimum of occewater (A1) Water Table (A2) Lation (A3) The Marks (B1) Lation (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aer Tr-Stained Leaves (E	one is require	ed; check all that	apply) Salt Crust (I Aquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not Presence of	B11) Ina (B13) Iulfide Ode Water Ta cospheres of tilled) f Reduced Surface (C	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm Festrictive L Type: Depth (inc.) Remarks: HYDROLOG Wetland Hyc Primary Indic Surfac High Satura Water Sedin Drift D Algal Iron D Inund Water	Mucky Peat or Peat Layer: (if observed) Area (if observed) Y Arology Indicators: Cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer r-Stained Leaves (E	one is require	ed; check all that	apply) Salt Crust (I Aquatic Fau Hydrogen S Ory-Season Oxidized Rhiz where not Presence of Thin Muck S Other (Expla	B11) una (B13) ulfide Ode Water Ta cospheres of tilled) f Reduced Surface (Cain in Ren	or (C1) able (C2) on Living Roots (C3) d Iron (C4)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
2.5 cm 5 cm Restrictive L Type: Depth (inc. Remarks: HYDROLOG Wetland Hyc Primary Indic Surfar High V Satura Water Sedin Drift D Algal Iron D Inund Water Field Observ	Mucky Peat or Peat Layer: (if observed) Thes): Y Chrology Indicators: Eators (minimum of oce Water (A1) Water Table (A2) Lation (A3) If Marks (B1) Leposits (B3) Mat or Crust (B4) Deposits (B5) Lation Visible on Aer In-Stained Leaves (External of the control of the c	one is require	ed; check all that Graph of the second of t	apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz Where not Presence of Thin Muck S Dther (Expla	B11) una (B13) ulfide Ode Water Ta cospheres of tilled) f Reduced Surface (Cain in Ren	or (C1) able (C2) on Living Roots (C3) d Iron (C4) C7) narks)	Hydric So	ors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Determ	ination Data Fo	rm - Great Plains Region	ı	
Project/Site: I-25/I-80 Interchange	City/County: (Cheyenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Transportation	on	State: WY	Sampling Point:	S-78
Investigator(s): R. Newton, D. Soucy		Section, To	ownship, Range: S11	T13N R67W
Landform (hillslope, terrace, etc.): swale	Local Relief	(concave, convex, none): co	ncave	Slope (%): <u>0-2</u>
Subregion (LRR): G - Western Great Plains	Lat. 22	23651.7195 Long:	742063.1863	Datum: WY E
Soil Map Unit Name: Urban land-Merden complex, 0 to	3 percent slopes	NWI	Classification:	UPL
Are climatic/hydrologic conditions on the site typical for th	nis time of year?	Yes X No (If no	, explain in Remarks)
Are Vegetation , Soil , or Hydrology	significantly disturbed	l? Are "Normal Circumstances" pr	esent? Yes	X No
Are Vegetation , Soil , or Hydrology	naturally problematic?	? (If needed, explai	n any answers in Rei	marks.)
SUMMARY OF FINDINGS - Attach site map showing s		·	etc.	,
Hydrophytic Vegetation Present? Yes X No		· · ·		
Hydric Soil Present? Yes X No	Is the	Sampled Area within a Wetland?	Yes	X No
Wetland Hydrology Present? Yes X No	_		_	
	<u> </u>			
Remarks:				
Depressional palustrine emergent wetland PEM-26 in on/	off-ramp island.			
VEGETATION - Use scientific names of plants.		<u> </u>		
Absolute <u>Tree Stratum</u> (Plot size: 30x30 ft) % Cover	Dominant Indicator Species? Status	Dominance Test Workshee Number of Dominant Species		
1	opecies: otatus	That Are OBL, FACW, or FA		2 (A)
2	· 	(excluding FAC-):		(A)
3.		Total Number of Dominant		
4.		Species Across All Strata:		2 (B)
5.		- -		
Sapling/Shrub Stratum (Plot size: 15x15 ft) 1.	= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FA		100% (A/B)
2.		Prevalence Index Workshe	et:	
3.		Total % Cover of:	<u> </u>	Multiply by:
4	<u> </u>	OBL species	95 x 1 =	95
5		FACW species	0 x 2 =	0
0	= Total Cover	FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)		FACU species	0 x 4 =	0
1. Typha angustifolia 30	Y OBL	UPL species	0 x 5 =	0
2. Carex aquatilis 65	Y OBL	Column Totals:	95 (A)	95 (B)
3		_	ce Index = B/A =	1.0
4		Hydrophytic Vegetation Ind		
5	- 	–	or Hydrophytic Veget	ation
6	- —— ——	X 2. Dominance X 3. Prevalence		
8		_	al Adaptations¹ (Prov	ride sun-
9.	<u> </u>		Remarks or on a sep	•
0	· 	Problematic Hy	/drophytic Vegetation	(Explain)
95	= Total Cover		a. spirita vogotation	(=xp:siii)
Woody Vine Stratum (Plot size: 30x30 ft)	-			
1.		¹ Indicators of hydric sa	oil and wetland hydrolo	nav must bo
2.	- —	present, unless disturb		gy must be
0	= Total Cover			
% Bare Ground in Herb Stratum 5 %		Hydrophytic Vegetation	on Present?	X Yes No
			_	
Remarks:		1		

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(inches)	Matrix			Redox F	eatures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-4	10 YR 2/1	100				_	Sandy Clay	gravels throughout	
4-6	10 YR 3/2	100					Sand		
6-8	10 YR 5/3	100					Sandy Clay		
8-14	10 YR 5/2	95	7.5 YR 4/6	5	С	M	Sandy Clay		
14-16	10 YR 5/2	100					Sandy Clay		
¹ Type: C=Cd	oncentration, D=Dep	oletion, RM	=Reduced Matrix	, CS=Cove	ered or Co	oated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix	
Hydric Soil I	ndicators						Indicat	ors for Problematic Hydric Soils	s³:
Histo	sol (A1)		_	Sand	y Gleyed	Matrix (S4)	:	1 cm Muck (A9) (LRR I, J)	
Histic	Epipedon (A2)			Sand	y Redox ((S5)		Coast Prairie Redox (A16) (LRR F	, G, H)
Black	Histic (A3)		_	Stripp	oed Matrix	x (S6)		Dark Surface (S7) (LRR G)	
Hydro	ogen Sulfide (A4)		_	Loam	y Mucky	Mineral (F1)		High Plains Depressions (F16)	
Strati	fied Layers (A5) (LF	RR F)	·-	Loam	y Gleyed	Matrix (F2)		(LRR H outside of MLRA 72 &	73)
1 cm	Muck (A9) (LRR F,	G , H)	·	X Deple	eted Matri	ix (F3)	1	Reduced Vertic (F18)	
Deple	eted Below Dark Sur	rface (A11)	·-	Redo	x Dark Su	urface (F6)		Red Parent Material (TF2)	
Thick	Dark Surface (A12))	·-	Deple	eted Dark	Surface (F7)		Other (Explain in Remarks)	
Sand	y Mucky Mineral (S	1)	_	Redo	x Depres	sions (F8)	³ Indicat	ors of hydrophylic vegetation a	nd
2.5 cı	m Mucky Peat or Pe	eat (S2) (LF	RR G, H)	High	Plains De	epressions (F16)	wetland	d hydrology must be present, ur	nless
	Mucky Peat or Peat	t (S3) (LRR	t F)	(ML	.RA 72 & 7	3 of LRR H)	disturb	ed or problematic.	
5 cm	Mucky I cat of I ca	· -/ ·					disturbed or problematic.		
Restrictive I	_ayer: (if observed)								
Restrictive I	_ayer: (if observed)						Hydric Sc	il Present? Yes X	No
Restrictive I Type: Depth (inc	_ayer: (if observed)						Hydric Sc	il Present? Yes X	No
Restrictive I	_ayer: (if observed)						Hydric Sc	il Present? Yes X	No
Restrictive I Type: Depth (inc Remarks:	_ayer: (if observed) hes):						Hydric Sc	il Present? Yes X	No
Restrictive I Type: Depth (inc Remarks:	_ayer: (if observed) hes):						Hydric Sc	il Present? Yes X	No
Restrictive I Type: Depth (inc) Remarks: HYDROLOG	hes): Y drology Indicators:			ot apply)					
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic	Ayer: (if observed) hes): Y drology Indicators: eators (minimum of company)		ired; check all tha		(044)	S		ors (minimum of two required,	
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	Ayer: (if observed) thes): Y drology Indicators: eators (minimum of oce Water (A1)		ired; check all tha	Salt Crust	` ,			ors <i>(minimum of two required,</i> Surface Soil Cracks (B6))
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	Ayer: (if observed) thes): Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2)		ired; check all tha	Salt Crust Aquatic Fa	iuna (B13	3)		ors (minimum of two required, Surface Soil Cracks (B6) Sparsley Vegetated Concave Sur)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur	Ayer: (if observed) hes): Y drology Indicators: cators (minimum of occewater (A1) Water Table (A2) ation (A3)		ired; check all tha	Salt Crust Aquatic Fa Hydrogen	iuna (B13 Sulfide O	3) dor (C1)		ors (minimum of two required, Surface Soil Cracks (B6) Sparsley Vegetated Concave Sur Drainage Patterns (B10)) rf. (B8)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate	Ayer: (if observed) Thes): Y drology Indicators: cators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1)		ired; check all tha	Salt Crust Aquatic Fa Hydrogen Dry-Seaso	una (B13 Sulfide O n Water ⁻	dor (C1) Table (C2)	Secondary Indicato	ors (minimum of two required, Surface Soil Cracks (B6) Sparsley Vegetated Concave Sur Drainage Patterns (B10) Oxidized Rhizospheres on) rf. (B8)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir	Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2)		ired; check all tha	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh	iuna (B13 Sulfide O n Water ⁻ izospheres	3) dor (C1)	Secondary Indicato	Surface Soil Cracks (B6) Sparsley Vegetated Concave Surfange Patterns (B10) Oxidized Rhizospheres on Roots (C3) (where tilled)) rf. (B8)
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I	Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)		ired; check all tha	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no	una (B13 Sulfide O n Water ⁻ izospheres t tilled)	s) dor (C1) Table (C2) s on Living Roots (C3)	Secondary Indicato	Surface Soil Cracks (B6) Sparsley Vegetated Concave Sur Drainage Patterns (B10) Oxidized Rhizospheres on Roots (C3) (where tilled) Crayfish Burrows (C8)	rf. (B8) Living
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal	Ayer: (if observed) Thes): Y Arology Indicators: Eators (minimum of of other of other of other of other of other other of other o		ired; check all tha	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence o	nuna (B13 Sulfide O n Water ⁻ izospheres t tilled)	dor (C1) Table (C2) s on Living Roots (C3) ed Iron (C4)	Secondary Indicato	ors (minimum of two required, Surface Soil Cracks (B6) Sparsley Vegetated Concave Sur Drainage Patterns (B10) Oxidized Rhizospheres on Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Im-) rf. (B8) Living agery (C9
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I	Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	: one is requi	ired; check all tha	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of Thin Muck	suna (B13 Sulfide On In Water izospheres t tilled) of Reduce Surface	dor (C1) Table (C2) s on Living Roots (C3) ed Iron (C4)	Secondary Indicato	Surface Soil Cracks (B6) Sparsley Vegetated Concave Sur Drainage Patterns (B10) Oxidized Rhizospheres on Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Im Geomorphic Position (D2)) rf. (B8) Living agery (C9
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I	Ayer: (if observed) Thes): Y Arology Indicators: Eators (minimum of of other of other of other of other of other other of other o	: one is requi	ired; check all tha	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence o	suna (B13 Sulfide On In Water izospheres t tilled) of Reduce Surface	dor (C1) Table (C2) s on Living Roots (C3) ed Iron (C4)	Secondary Indicato	Surface Soil Cracks (B6) Sparsley Vegetated Concave Sur Drainage Patterns (B10) Oxidized Rhizospheres on Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Im. Geomorphic Position (D2) FAC-Neutral Test (D5)	rf. (B8) Living agery (C9
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund	Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	: one is requi	ired; check all tha	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of Thin Muck	suna (B13 Sulfide On In Water izospheres t tilled) of Reduce Surface	dor (C1) Table (C2) s on Living Roots (C3) ed Iron (C4)	Secondary Indicato	Surface Soil Cracks (B6) Sparsley Vegetated Concave Sur Drainage Patterns (B10) Oxidized Rhizospheres on Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Im Geomorphic Position (D2)	rf. (B8) Living agery (C9
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund	Y drology Indicators: eators (minimum of oce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aer r-Stained Leaves (B	: one is requi	ired; check all tha	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of Thin Muck	suna (B13 Sulfide On In Water izospheres t tilled) of Reduce Surface	dor (C1) Table (C2) s on Living Roots (C3) ed Iron (C4)	Secondary Indicato	Surface Soil Cracks (B6) Sparsley Vegetated Concave Sur Drainage Patterns (B10) Oxidized Rhizospheres on Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Im. Geomorphic Position (D2) FAC-Neutral Test (D5)	rf. (B8) Living agery (C9
Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate	Ayer: (if observed) Thes): Y Arology Indicators: Eators (minimum of of other of other of other of other of other other of other o	: one is requi	ired; check all tha	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of Thin Muck Other (Exp	suna (B13 Sulfide On In Water izospheres t tilled) of Reduce Surface	dor (C1) Table (C2) s on Living Roots (C3) ed Iron (C4)	Secondary Indicato	Surface Soil Cracks (B6) Sparsley Vegetated Concave Sur Drainage Patterns (B10) Oxidized Rhizospheres on Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Im. Geomorphic Position (D2) FAC-Neutral Test (D5)) Living agery (C9
Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I X Algal Iron I Inund Wate	Ayer: (if observed) Area of the served) Y Arology Indicators: Eators (minimum of of the color	: one is requi	ired; check all tha	Salt Crust Aquatic Fa Hydrogen Dry-Seaso Oxidized Rh (where no Presence of Thin Muck Other (Exp	suna (B13 Sulfide O n Water - izospheres t tilled) of Reduce Surface (dor (C1) Table (C2) s on Living Roots (C3) ed Iron (C4) (C7) emarks)	Secondary Indicato	ors (minimum of two required, Surface Soil Cracks (B6) Sparsley Vegetated Concave Sur Drainage Patterns (B10) Oxidized Rhizospheres on Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Im. Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7)) Living agery (C9

Wetland	Determination	n Data Forr	n - Great Plains Regio	n	
Project/Site: I-25/I-80 Interchange		City/County: Ch	eyenne/Laramie	Sampling Date:	8/1/2019
Applicant/Owner: Wyoming Dept. of Tra	ansportation		State: WY	Sampling Point:	S-79
Investigator(s): R. Newton, D. Soucy			Section,	Township, Range: S11	T13N R67W
Landform (hillslope, terrace, etc.): roadsid	de slope	Local Relief (c	oncave, convex, none): r	none	Slope (%): 0-1
Subregion (LRR): G - Western Great Pla	ins	Lat. 2230	644.2151 Long:	742067.2256	Datum: WY E
Soil Map Unit Name: Urban land-Merden co	mplex, 0 to 3 percent	slopes	NW	/I Classification:	UPL
Are climatic/hydrologic conditions on the site	typical for this time of	year? Ye	s X No (If I	no, explain in Remarks))
Are Vegetation , Soil , or Hy	drology signific	antly disturbed?	Are "Normal Circumstances"	present? Yes	X No
Are Vegetation , Soil , or Hy	drology natural	ly problematic?	(If needed, expl	lain any answers in Rei	marks.)
SUMMARY OF FINDINGS - Attach site map					•
Hydrophytic Vegetation Present? Yes	No X	,	, ,	·	
Hydric Soil Present? Yes	No X	Is the S	ampled Area within a Wetland	l? Yes	No X
Wetland Hydrology Present? Yes	No X	10 110 0	ampioa / iroa wiaimi a vvoilano		
Remarks:					
Paired upland point for PEM-26.					
VEGETATION - Use scientific names of pla	nts.				
	Absolute Domina	ant Indicator	Dominance Test Worksho	et:	
Tree Stratum (Plot size: 30x30 ft)	% Cover Specie	s? Status	Number of Dominant Speci	es	
1			That Are OBL, FACW, or F	AC:	0 (A)
2			(excluding FAC-):		
3			Total Number of Dominant		
4			Species Across All Strata:		1 (B)
5					
	0 = Total C	over	Percent of Dominant Speci		00/ (1.75)
Sapling/Shrub Stratum (Plot size: 15x	15 ft)		That Are OBL, FACW, or F	AC:	0% (A/B)
1			Dravalance Index Worksh		
2			Prevalence Index Worksh Total % Cover o		Multiply by:
3			OBL species	0 x1=	0
5.			FACW species	$\frac{0}{0}$ $\times 2 =$	0
·	0 = Total C	over	FAC species	$\frac{0}{0} \times 3 =$	0
Herb Stratum (Plot size: 5x5 ft)			FACU species	14 x 4 =	56
1. Festuca ovina	80 Y	NI	UPL species	80 x 5 =	400
2. Cirsium arvense	14 N	FACU	Column Totals:	94 (A)	456 (B)
3.				nce Index = B/A =	4.9
4.			Hydrophytic Vegetation II	ndicators:	
5.			1. Rapid Tes	t for Hydrophytic Veget	ation
6.			2. Dominance	e Test is >50%.	
7.				e Index is <u><</u> 3.0¹	
8				ical Adaptations¹ (Prov	
9.			porting data i	n Remarks or on a sep	parate sheet)
10			Problematic I	Hydrophytic Vegetation	(Explain)
Woody Vine Stratum (Plot size: 30x30	94 = Total C	over			
Woody Vine Stratum (Plot size: 30x30	11)		1		
2				soil and wetland hydrolo	ogy must be
	0 = Total	Cover	present, unless disti	urbed or problematic.	
		50.01	Hydrophytic Vegeta	ition Present?	Yes X No
			, op, a.c vegete		
Remarks:					
Species with no indicator (NI) are treated as U	JPL for this analysis.				
, , , , ,	,				

Profile Descr	ription: (Describe to	the depth	needed to docume	ent the ind	dicator o	r confirm the absenc	ce of indicators.)	
Depth	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10 YR 4/3	100					Clay	
4-18	10 YR 5/3	100					Sandy Clay	
¹ Type: C=Co	ncentration, D=Dep	letion, RM=	Reduced Matrix, (CS=Cove	red or Co	pated Sand Grains.	² Location: PL=F	Pore Lining, M=Matrix
Hydric Soil Ir	ndicators		-				Indicato	rs for Problematic Hydric Soils ³ :
-	ol (A1)			Sandy	/ Gleyed	Matrix (S4)	1	cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)		_		/ Redox (past Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		<u> </u>	 Stripp	ed Matrix	x (S6)		ark Surface (S7) (LRR G)
Hydro	gen Sulfide (A4)		<u> </u>			Mineral (F1)		igh Plains Depressions (F16)
	ied Layers (A5) (LR	RF)	<u> </u>		-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F,	•	<u> </u>		ted Matri	` ,	Ro	educed Vertic (F18)
Deplet	ted Below Dark Sur	face (A11)	_	Redox	κ Dark Sι	urface (F6)	R	ed Parent Material (TF2)
Thick	Dark Surface (A12)	,	<u> </u>	 Deple	ted Dark	Surface (F7)	 0	ther (Explain in Remarks)
Sandy	Mucky Mineral (S1	1)	_	Redox	k Depres	sions (F8)	3Indicate	ors of hydrophylic vegetation and
2.5 cm	n Mucky Peat or Pe	at (S2) (LRI	R G, H)	— High F	Plains De	pressions (F16)		hydrology must be present, unless
5 cm l	Mucky Peat or Peat	(S3) (LRR	F)	(MLI	RA 72 & 7	3 of LRR H)	disturbe	d or problematic.
Restrictive L	ayer: (if observed)							
Type:	ay c (cc)							
Depth (inch	nes):						Hydric Soi	Present? Yes No X
							11,411.0 001	163 NO X
Remarks:								
HYDROLOGY								
-	rology Indicators:							
-	ators (minimum of o	ne is requir				Se	econdary Indicator	s (minimum of two required)
	ce Water (A1)			alt Crust (,			Surface Soil Cracks (B6)
High V	Vater Table (A2)			quatic Fa				Sparsley Vegetated Concave Surf. (B8)
	ation (A3)			ydrogen S				Drainage Patterns (B10)
	Marks (B1)			•		Table (C2)		Oxidized Rhizospheres on Living Roots (C3) (where tilled)
	ent Deposits (B2)		O	kidized Rhi	zospheres	s on Living Roots (C3)		
	eposits (B3)		•	here not	•			Crayfish Burrows (C8)
	Mat or Crust (B4)					ed Iron (C4)		Saturation Visible on Aerial Imagery (C9)
	eposits (B5)			nin Muck		` ,		Geomorphic Position (D2)
	ation Visible on Aeri	0,	(B7) O	ther (Expl	lain in Re	emarks)		FAC-Neutral Test (D5)
Water	-Stained Leaves (B	9)						Frost-Heave Hummocks (D7) (LRR F)
Field Observ	ations:							
Surface Wate	r Present?		Yes	N	o X	Depth (inches)		Wetland Hydrology
Water Table F	Present?		Yes	N	o <u>X</u>	Depth (inches)		Present?
Saturation Pre	esent? (includes ca	pillary fringe	e) Yes	No	o X	Depth (inches)		Yes X No
Remarks:								

Wetland De	etermination D	ata Form	ı - Great	Plains Reg	ion	
Project/Site: I-25/I-80 Interchange	Cit	y/County: Che	yenne/Lara	amie	Sampling Date	7/30/2019
Applicant/Owner: Wyoming Dept. of Trans	portation			State: WY	- Sampling Point	S-80
Investigator(s): R. Newton, D. Soucy				Section	, Township, Range: S	11 T13N R67W
Landform (hillslope, terrace, etc.): depression	ı L	ocal Relief (co	ncave, con	vex, none):	Minor Concave	Slope (%): 0-1
Subregion (LRR): G - Western Great Plains	La	nt. 2244	45.8037	Long:	741109.1031	Datum: WY E
Soil Map Unit Name: Urban land-Merden compl	ex, 0 to 3 percent slop	oes		N	WI Classification:	UPL
Are climatic/hydrologic conditions on the site typic	cal for this time of yea	r? Yes	X	No (I	f no, explain in Rema	rks)
Are Vegetation , Soil , or Hydrol	ogy significantl	y disturbed? A	re "Normal	Circumstances	" present? Yes	X No
Are Vegetation , Soil , or Hydrol	ogv naturally p	roblematic?		(If needed, ex	plain any answers in l	Remarks.)
SUMMARY OF FINDINGS - Attach site map sho			ansects. in	•	•	,
Hydrophytic Vegetation Present? Yes X	No					
Hydric Soil Present? Yes	No X	Is the Sa	mpled Area	within a Wetlar	nd? Yes	s No X
Wetland Hydrology Present? Yes X	No X	10 1110 00	mpica / ii ca	Within a Wollan	10.	, \ \
Wettand Trydrology Fresent: Fes X						
Remarks:						
Depressional area with deminant hydrophytic year	atation and watland by	udrala av but la	akina hudria	a a ila		
Depressional area with dominant hydrophytic veg		yurology but la	icking nyario	SOIIS.		
VEGETATION - Use scientific names of plants.			Daminana	a Tank Warden	h 4.	
	Absolute Dominant 6 Cover Species?	Indicator Status		ce Test Worksl Dominant Spe		
1.	,			DBL, FACW, or		3 (A)
2.			(excluding	FAC-):	_	
3.			Total Num	ber of Dominar	nt	
4.				cross All Strata		3 (B)
5.					_	
Sapling/Shrub Stratum (Plot size: 15x15 ft	0 = Total Cover	r		Dominant Spe DBL, FACW, or		100% (A/B)
2.			Prevalenc	e Index Works	sheet:	
3.			Т	otal % Cover	of:	Multiply by:
4			OBL s	pecies	0 x 1	1 = 0
5				pecies	100 x 2	
	0 = Total Cove	r		oecies	0 x 3	
Herb Stratum (Plot size: 5x5 ft)				pecies	0 x 4	
1. Juncus balticus	25 Y	FACW		pecies	0 x 5	
2. Alopecurus pratensis	30 Y	FACW	Column To		100 (A	
3. Agrostis stolonifera	42 Y	FACW	<u> </u>		lence Index = B/A =	2.0
4. Hordeum jubatum	3 N	FACW		tic Vegetation		
5					est for Hydrophytic Ve	getation
6					ice Test is >50%. ice Index is <3.01	
·			_		ogical Adaptations¹ (P	rovide sun-
8. 9.			_	•	a in Remarks or on a	•
10.			_	Problemation	c Hydrophytic Vegetat	ion (Explain)
	100 = Total Cover	r				
Woody Vine Stratum (Plot size: 30x30 ft	_)					
1				•	ric soil and wetland hydi	rology must be
2			рі	resent, unless dis	sturbed or problematic.	
% Bare Ground in Herb Stratum 0	0 = Total Co %	ver	H	ydrophytic Vege	tation Present?	X YesNo
Remarks:						

Depth	Matrix			Redox F	eatures				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-2	10 YR 2/2	100				· <u></u>	Clay Loam		
2-18	10 YR 5/3	98	7.5 YR 5/6	2	С	M	sandy clay		
						· <u></u>			
						· <u></u>			
						· 			
						· <u></u>			
¹ Type: C=Co	oncentration, D=Dep	oletion RM=	=Reduced Matri	x CS=Cove	red or Co	ated Sand Grains	² l ocation: PI =	Pore Lining, M=Matrix	
Hydric Soil	·			, 00 0010				ors for Problematic Hydric Soils ³ :	
•	sol (A1)			Sand	v Gleved I	Matrix (S4)		cm Muck (A9) (LRR I, J)	
	, ,				y Redox (\$			Coast Prairie Redox (A16) (LRR F, G, H)	
	Histic Epipedon (A2) Black Histic (A3)				ed Matrix	*			
	` ,			—		` '		Dark Surface (S7) (LRR G) High Plains Depressions (F16)	
	ogen Sulfide (A4) ified Layers (A5) (LF	DD E\				Mineral (F1)		. , ,	
	• , , ,	•			-	Matrix (F2)	-	(LRR H outside of MLRA 72 & 73)	
	Muck (A9) (LRR F,				ted Matrix	` '		Reduced Vertic (F18)	
	eted Below Dark Sui Dark Surface (A12	, ,				rface (F6) Surface (F7)		Red Parent Material (TF2)	
	`	,				` ,		Other (Explain in Remarks)	
Cand	y Mucky Mineral (S	1)			x Depress	pressions (F16)		, , , ,	
		at (92) (I D	DC II/			DI 68810H8 (F 10)	³ Indicators of hydrophylic vegetation and wetland hydrology must be present, unless		
2.5 c	m Mucky Peat or Pe						disturbe	:	
2.5 c						3 of LRR H)	disturbe	ed or problematic.	
2.5 cm	m Mucky Peat or Pe	t (S3) (LRR					disturbe	:	
2.5 cm	m Mucky Peat or Pe Mucky Peat or Pea	t (S3) (LRR					disturbe	:	
2.5 cm 5 cm	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR						:	
2.5 cm 5 cm Restrictive I Type: Depth (inc	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR						ed or problematic.	
2.5 cm 5 cm Restrictive I Type: Depth (inc	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR						ed or problematic.	
2.5 cm 5 cm Restrictive I Type: Depth (inco	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR						ed or problematic.	
2.5 cm 5 cm Type: Depth (inc.) Remarks:	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches):	t (S3) (LRR						ed or problematic.	
2.5 cm 5 cm Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches):	t (S3) (LRR	F)	(ML		B of LRR H)	Hydric So	il Present? Yes No	
2.5 cm 5 cm Type: Depth (incomplete incomplete incomple	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): GY drology Indicators: cators (minimum of cators)	t (S3) (LRR	F)	(ML	RA 72 & 73	B of LRR H)	Hydric So	il Present? Yes No_	
2.5 cm 5 cm 7 per Type: Depth (incomplete in the complete in t	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): GY drology Indicators: cators (minimum of o	t (S3) (LRR	F)	at apply) Salt Crust	RA 72 & 73	S of LRR H)	Hydric So	il Present? Yes No Surface Soil Cracks (B6)	
2.5 cm 5 cm Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of o	t (S3) (LRR	F)	at apply) Salt Crust ((B11) una (B13)	S of LRR H)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)	
2.5 cm 5 cm Type: Depth (incomplete in the complete in the com	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of observed) water (A1) Water Table (A2) ration (A3)	t (S3) (LRR	F)	at apply) Salt Crust (Aquatic Fa	(B11) una (B13) Sulfide Oc	S of LRR H) S dor (C1)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)	
2.5 cm 5 cm Type: Depth (incomplete in the complete in the com	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of of observed) water (A1) Water Table (A2) ration (A3) or Marks (B1)	t (S3) (LRR	F)	at apply) Salt Crust of Aquatic Fa Hydrogen Son	(B11) una (B13) Sulfide Od n Water T	Sof LRR H) Solor (C1) Sable (C2)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)	
2.5 cm 5 cm 7 cm Restrictive I Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate X Sedir	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of once Water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2)	t (S3) (LRR	F)	at apply) Salt Crust of Aquatic Father Hydrogen Sondized Rhi	(B11) una (B13) Sulfide Oc n Water T	S of LRR H) S dor (C1)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)	
2.5 cm 5 cm 7 ype: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate X Sedir Drift I	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of of observed) water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3)	t (S3) (LRR	F)	at apply) Salt Crust (Aquatic Fa Hydrogen S Dry-Seasol Oxidized Rhi	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled)	Sof LRR H) Solution (C1) Table (C2) on Living Roots (C3)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)	
2.5 cm 5 cm Type: Depth (incomplete limits) Primary Indicomplete limits Surfation High Satur Wate X Sedir Drift I Algal	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of of observed) water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	t (S3) (LRR	F)	at apply) Salt Crust of Aquatic Fa Hydrogen Solutized Rhi (where not of Presence of	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled) of Reduce	Sof LRR H) Solution (C1) Sable (C2) on Living Roots (C3) d Iron (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (
2.5 cm 5 cm 7 perinary India Surfa High Satur Wate X Sedir Algal Iron I	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of object (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	t (S3) (LRR	red; check all th	at apply) Salt Crust (Aquatic Fa Hydrogen S Dry-Season Oxidized Rhi (where not Presence of	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled) of Reduce Surface (Sof LRR H) Solution (C1) Solution (C2) Solution (C2) Solution (C4) Solution (C4) Solution (C4) Solution (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2)	
2.5 cm 5 cm 7 ype: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate X Sedir Drift I Algal Iron I Inunc	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of of observed) water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aei	t (S3) (LRR	red; check all th	at apply) Salt Crust of Aquatic Fa Hydrogen Solutized Rhi (where not of Presence of	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled) of Reduce Surface (Sof LRR H) Solution (C1) Solution (C2) Solution (C2) Solution (C4) Solution (C4) Solution (C4) Solution (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) FAC-Neutral Test (D5)	
2.5 cm 5 cm 7 ype: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate X Sedir Drift I Algal Iron I Inunc	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of object (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	t (S3) (LRR	red; check all th	at apply) Salt Crust (Aquatic Fa Hydrogen S Dry-Season Oxidized Rhi (where not Presence of	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled) of Reduce Surface (Sof LRR H) Solution (C1) Solution (C2) Solution (C2) Solution (C4) Solution (C4) Solution (C4) Solution (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2)	
2.5 cm 5 cm 7 cm Restrictive I Type: Depth (ince Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate X Sedir Drift I Algal Iron I Inunc X Wate	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of of observed) water (A1) Water Table (A2) ration (A3) er Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aer er-Stained Leaves (E	t (S3) (LRR	red; check all th	at apply) Salt Crust (Aquatic Fa Hydrogen S Dry-Season Oxidized Rhi (where not Presence of	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled) of Reduce Surface (Sof LRR H) Solution (C1) Solution (C2) Solution (C2) Solution (C4) Solution (C4) Solution (C4) Solution (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) FAC-Neutral Test (D5)	
2.5 cm 5 cm 7 ype: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate X Sedir Drift I Algal Iron I Inunc	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of of other of the other) cators (Minimum of other)	t (S3) (LRR	red; check all th	at apply) Salt Crust of Aquatic Far Hydrogen Solidized Rhi (where no of Thin Muck Other (Exp	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled) of Reduce Surface (Sof LRR H) Solution (C1) Solution (C2) Solution (C2) Solution (C4) Solution (C4) Solution (C4) Solution (C4)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F	
2.5 cm 5 cm 7 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate X Sedir Drift I Algal Iron I Inunc X Wate Field Observ Surface Wate Water Table	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of observed) water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aere-Stained Leaves (Evations: er Present?	t (S3) (LRR	red; check all th	at apply) Salt Crust of Aquatic Fa Hydrogen S Dry-Season Oxidized Rhi (where not Presence of Thin Muck Other (Exp	(B11) una (B13) Sulfide Oc n Water T izospheres t tilled) of Reduce Surface (i	S of LRR H) Solution (C1) Sable (C2) on Living Roots (C3) d Iron (C4) C7) marks)	Hydric So	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F	

Wetland D	Determin	ation Da	ata Forn	า - Gre	at Plains Reg	jion			
Project/Site: I-25/I-80 Interchange		City	/County: Che	eyenne/L	aramie	Sampling [Date:	7/30/20	19
Applicant/Owner: Wyoming Dept. of Tra	nsportation			-	State: WY	Sampling P	oint:	S-81	
Investigator(s): R. Newton, D. Soucy					Section	– n, Township, Rang	e: S11 T ′	13N R67\	w
Landform (hillslope, terrace, etc.): swale		Lo	cal Relief (co	oncave, c	onvex, none):	concave	Slc	ppe (%):	0-1
Subregion (LRR): G - Western Great Plair	าร	Lat.	. 2245	57.5532	Long:	740264.2865		Datum: W	ΥE
Soil Map Unit Name: Ipson-Evanston comple	x, 6 to 30 per	cent slopes			<u> </u>	IWI Classification:	P	EMA/PEN	мс
Are climatic/hydrologic conditions on the site ty	pical for this t	time of year?	? Yes	, X	No (lf no, explain in Re	emarks)		
Are Vegetation , Soil , or Hyd	rology	significantly	disturbed? A	Are "Norm	al Circumstances	s" present? Yes		ΧN	No
Are Vegetation , Soil , or Hyd		naturally pro				rplain any answers	s in Rems		
SUMMARY OF FINDINGS - Attach site map	·· —			ransocts			, III I (CIIIG	11K3.)	
•		ipinig point	iocations, ti	ansects,	important leatu	1165, 616.			
Hydrophytic Vegetation Present? Yes >			0			10			
Hydric Soil Present? Yes			Is the Sa	mpled Ar	ea within a Wetla	nd?	Yes X	_ No	_
Wetland Hydrology Present? Yes _>	(No								
Remarks:	1 1 DEN	4.07	A. d. d d.					ht	
NWI-mapped depressional palustrine emergen features are present.		vi-27 connec	ted via serie	s of cuive	rts. Area also ma	ipped by NHD as a	1 channel	, but no c	nanne
VEGETATION - Use scientific names of plan	ts.			I					
Tree Stratum (Plot size: 30x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status		ance Test Works of Dominant Spe				
<u>Tree Stratum</u> (Plot size: 30x30 ft)	% Cover	Species?	Status		or Dominant Spe e OBL, FACW, or			2	(4)
2					ing FAC-):	17.0.			(A)
2									
J					umber of Domina Across All Strata			2	(B)
5.				Орсою	ACIOSS All Ollate	a.			(6)
·	0 =	Total Cover							
 Sapling/Shrub Stratum (Plot size: 15x1		Total Gover			of Dominant Spe e OBL, FACW, or		1(00%	(
Sapinig/Siliub Stratum (Flot size. 15x13	5 ft)			That Air	e OBL, FACVV, O	TAG.		JU 76	(A/B)
2				Provale	nce Index Work	shoot:	-		
3.				Fievale	Total % Cover		Mı	ultiply by	٧.
<u> </u>				OBL	species	80	x 1 =	80	<u>y · </u>
5.				FACW	species	10	x 2 =	20	—
<u> </u>	0 =	Total Cover		FAC	species	0	x 3 =	0	_
Herb Stratum (Plot size: 5x5 ft)		Total Cover		FACU	species	0	x 4 =	0	_
1. Typha angustifolia	60	Υ	OBL	UPL	species	0	x5=	0	_
Carex utriculata	20	<u>'</u>	OBL	Column	•	90	(A)	100	— _(B)
3. Juncus balticus	10	N	FACW	Column		lence Index = B/A		1.1	(B)
4.			TAOW	Hydron	hytic Vegetation				
5.				linguiop	-	est for Hydrophytic	: Venetati	ion	
6.						nce Test is >50%.	, vegetati	OII	
7.	 ·					nce Index is $\leq 3.0^{\circ}$			
8.						ogical Adaptations	¹ (Provide	e sup-	
9.						a in Remarks or o			t)
10.					Problemati	c Hydrophytic Veg	etation (F	-ynlain)	
	90 =	Total Cover			I TODICINAL	c riyaropriyac veg	Ctation (L	-xpiaiii)	
Woody Vine Stratum (Plot size: 30x30 ft		Total Gover							
VVOOdy Virie Stratum (Flot size. 30x30 ft					1				
2						ric soil and wetland sturbed or problema		must be	
<u>-</u>	0	= Total Cov		-	present, unless at	starbed or problems	<i>.</i>		-
% Bare Ground in Herb Stratum 10		- Total COV	O1		Hydronhytic Vess	atation Procent?	Y	Yes	No
Date Glouing in Help Stratum 10					Hydrophytic Vege	etation Fresents		162	
Damanta.									
Remarks:									

SOIL Sampling Point: S-81

	Matrix			Redox F	Features			
(inches)	Color (moist)	% Co	olor (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-1	10 YR 3/1	100					muck	
1-15	10 YR 3/1	100					Clay Loam	
¹ Type: C=Cc	oncentration, D=Deple	etion, RM=Re	duced Matrix,	CS=Cov	ered or Coat	ed Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil I	ndicators						Indicato	rs for Problematic Hydric Soils ³ :
•	sol (A1)			Sand	dy Gleyed Ma	atrix (S4)		cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)		_		dy Redox (S5		 c	oast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		_	— Strip	ped Matrix (36)		ark Surface (S7) (LRR G)
Hydro	ogen Sulfide (A4)		_	Loar	ny Mucky Mi	neral (F1)	——	igh Plains Depressions (F16)
	fied Layers (A5) (LRF	R F)	_		ny Gleyed M	, ,		(LRR H outside of MLRA 72 & 73)
X 1 cm	Muck (A9) (LRR F, G	i, H)	_		eted Matrix (R	educed Vertic (F18)
Deple	eted Below Dark Surfa	ace (A11)	_	Redo	ox Dark Surfa	ace (F6)	R	ed Parent Material (TF2)
Thick	Dark Surface (A12)		_	 Depl	eted Dark Su	urface (F7)		ther (Explain in Remarks)
Sand	y Mucky Mineral (S1)		_	Redo	ox Depressio	ns (F8)	3Indicate	ors of hydrophylic vegetation and
2.5 cr	m Mucky Peat or Pea	t (S2) (LRR G	i, H)	High	Plains Depr	essions (F16)		hydrology must be present, unless
5 cm	Mucky Peat or Peat (S3) (LRR F)	_	(M	LRA 72 & 73 c	of LRR H)	disturbe	d or problematic.
Restrictive L	_ayer: (if observed)						<u> </u>	
Type:								
Depth (incl	hes):						Hydric Soi	I Present? Yes X No
							,	
Remarks:								
HYDROLOG	Υ							
Wetland Hyd	drology Indicators:							
Primary Indic	ators (minimum of on	e is required;	check all that	apply)		Se	econdary Indicator	rs (minimum of two required)
X Surfa	ce Water (A1)		S	alt Crust	(B11)			Surface Soil Cracks (B6)
X High \	Water Table (A2)		A	quatic F	auna (B13)			Sparsley Vegetated Concave Surf. (B8)
	ration (A2)		H	lydrogen	Sulfide Odo	r (C1)		_Drainage Patterns (B10)
X Satura	alion (A3)		'					
	r Marks (B1)			ry-Seaso	on Water Tal	ole (C2)		Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Water	` ,		<u> </u>	-		ole (C2) n Living Roots (C3)		Roots (C3) (where tilled)
Water Sedin	r Marks (B1)			-	hizospheres or			
Water Sedim Drift D	r Marks (B1) nent Deposits (B2)			oxidized RI	hizospheres or	n Living Roots (C3)		Roots (C3) (where tilled) Crayfish Burrows (C8)
Water Sedim Drift E X Algal	r Marks (B1) nent Deposits (B2) Deposits (B3)		C 	oxidized Rl where no Presence	hizospheres or	Living Roots (C3)	x	Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Water Sedim Drift D X Algal	r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)	l Imagery (B7		oxidized RI where no Presence Thin Muck	hizospheres or ot tilled) of Reduced	Iron (C4)	<u> </u>	Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Water Sedin Drift D X Algal Iron D	r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	• • •		oxidized RI where no Presence Thin Muck	hizospheres or ot tilled) of Reduced k Surface (C	Iron (C4)	<u> </u>	Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Water Sedin Drift D X Algal Iron D	r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aeria r-Stained Leaves (B9	• • •		oxidized RI where no Presence Thin Muck	hizospheres or ot tilled) of Reduced k Surface (C	Iron (C4)	<u> </u>	Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
Water Sedin Drift D X Algal Iron D Inund Water	r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aeria r-Stained Leaves (B9	• • •	— — — — — — — — — — — — — — — — — — —	oxidized RI where no Presence Thin Muck Other (Ex	hizospheres or of tilled) of Reduced k Surface (Ci plain in Rem	Iron (C4)	<u> </u>	Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Geomorphic Position (D2) FAC-Neutral Test (D5)
Water Sedin Drift E X Algal Iron E Inund Water Field Observ	r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aeria r-Stained Leaves (B9 vations: er Present?	• • •	(N) Yes	oxidized Ri where no Presence Thin Muck Other (Ex	hizospheres or ot tilled) of Reduced k Surface (Ci plain in Rem	n Living Roots (C3) Iron (C4) 7) arks)	X X	Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland	Determi	nation Da	ata Fori	n - Grea	t Plains Regi	ion		
Project/Site: I-25/I-80 Interchange		City	/County: Ch	eyenne/La	ramie	Sampling I	Date:	7/30/2019
Applicant/Owner: Wyoming Dept. of Tr	ansportation	1			State: WY	Sampling F	oint:	S-82
Investigator(s): R. Newton, D. Soucy						, Township, Rang		
Landform (hillslope, terrace, etc.): ditch s	•	Lo	•		nvex, none):	none		ope (%):4
Subregion (LRR): G - Western Great Pla		Lat	. 224	565.8867	Long:	740257.3844		Datum: WY E
Soil Map Unit Name: Ipson-Evanston comp		-			N	WI Classification	:	UPL
Are climatic/hydrologic conditions on the site	typical for this	s time of year?	? Ye	s X	No(If	f no, explain in R	emarks)	
Are Vegetation, Soil, or Hy	/drology	significantly	disturbed?	Are "Norma	al Circumstances'	present? Yes		X No
Are Vegetation, Soil, or Hy	/drology	naturally pro	blematic?		(If needed, exp	olain any answer	s in Rema	arks.)
SUMMARY OF FINDINGS - Attach site map	showing sa	mpling point	locations,	transects,	important featur	es, etc.		
Hydrophytic Vegetation Present? Yes	X No							
Hydric Soil Present? Yes	No X		Is the S	ampled Are	a within a Wetlan	nd?	Yes	No X
Wetland Hydrology Present? Yes	No X							- —
Remarks:								
Paired upland point for PEM-27.								
VEGETATION - Use scientific names of pla		<u> </u>		Domina	nce Test Worksh	2004:		
Tree Stratum (Plot size: 30x30 ft)	Absolute % Cover	Dominant Species?	Indicator Status		of Dominant Spe			
1.		'			OBL, FACW, or			1 (A)
2.				(excludir	ng FAC-):			` '
3.				Total Nu	mber of Dominan	ıt		
4.					Across All Strata:			1 (B)
5.								
Sapling/Shrub Stratum (Plot size: 15x	0 = 15 ft)	= Total Cover			of Dominant Spec OBL, FACW, or		10	00% (A/B)
2.				Prevaler	nce Index Works	sheet:		
3					Total % Cover	of:	Mι	ultiply by:
4				OBL	species	0	x 1 =	0
5					species	70	x 2 =	140
	0 =	= Total Cover			species	0	x 3 =	0
Herb Stratum (Plot size: 5x5 ft)					species	0	x 4 =	0
Gaura parviflora	8	N	NI		species	20	x 5 =	100
2. Juncus balticus	10	N	FACW	Column		90	(A)	240 (B)
3. Muhlenbergia asperifolia	15	N	FACW			ence Index = B/A	\ =	2.7
4. Euphorbia esula	12	<u>N</u>	NI	Hydroph	ytic Vegetation			
5. Distichlis spicata	45	<u> </u>	FACW	-		st for Hydrophytic	•	on
6				-		ce Test is >50%.		
7				-		ce Index is <3.01 ogical Adaptations	ol (Drovide	
8				-		in Remarks or o		
9					-			
0.	90 =	= Total Cover		-	Problematic	: Hydrophytic Ve	jetation (E	explain)
Woody Vine Stratum (Plot size: 30x30								
1.	— ′				¹ Indicators of hydr	ic soil and wetland	hydrology	must he
2.					present, unless dis			ase be
-	0	= Total Cov	er					
% Bare Ground in Herb Stratum	%				Hydrophytic Veget	tation Present?	<u> </u>	YesNo
Remarks:								
Species with no indicator (NI) are treated as	JPL for this a	nalysis.						

SOIL Sampling Point: S-82

Depth	Matrix			Redox Fe	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10 YR 3/2	100					Clay	
6-16								road fill
								_
								_
								_
								_
¹ Type: C=Co	oncentration, D=Dep	oletion. RM=	Reduced Matrix	CS=Cover	ed or Coa	ted Sand Grains.	² Location: P	L=Pore Lining, M=Matrix
Hydric Soil I								ators for Problematic Hydric Soils ³ :
•	sol (A1)			Sandv	Gleyed M	latrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		-		Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	(Histic (A3)		-		ed Matrix	,		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)		_			lineral (F1)		High Plains Depressions (F16)
	ified Layers (A5) (LF	2R F)	_		•	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F ,	,	_		ed Matrix	, ,		Reduced Vertic (F18)
	eted Below Dark Su		-		Dark Sur	` ,		Red Parent Material (TF2)
	Dark Surface (A12	, ,	-			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S	,	_		Depressi	` ,	3	_
Sand		')	-			ressions (F16)		cators of hydrophylic vegetation and and hydrology must be present, unless
		at (S2) (I RE	3 G H)		Idilio DCP	103310113 (1 10)	WCCIC	ind mydrology mast be present, amess
2.5 cı	m Mucky Peat or Pe		_				distu	rbed or problematic.
2.5 cı			_		RA 72 & 73		distu	· -: · · · · · · · · · · · · · · · · · ·
2.5 ci 5 cm	m Mucky Peat or Pe	t (S3) (LRR I	_				distu	· -: · · · · · · · · · · · · · · · · · ·
2.5 ci 5 cm	m Mucky Peat or Pea Mucky Peat or Pea	t (S3) (LRR I	_				distu	· -: · · · · · · · · · · · · · · · · · ·
2.5 cm 5 cm	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR I	_					· -: · · · · · · · · · · · · · · · · · ·
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2.5 cm 5 cm Restrictive I Type: Depth (inc	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR I	_					rbed or problematic.
2.5 cm 5 cm Restrictive I Type: Depth (inc Remarks:	m Mucky Peat or Pe Mucky Peat or Pea Layer: (if observed)	t (S3) (LRR I	_					rbed or problematic.
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2.5 cm 5 cm Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): GY drology Indicators: cators (minimum of c	t (S3) (LRR I	ed; check all tha	(MLR	RA 72 & 73	of LRR H)	Hydric \$	Soil Present? Yes No 3
2.5 cm 5 cm Restrictive I Type: Depth (inc Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of o	t (S3) (LRR I	ed; check all tha	(MLR t apply) Salt Crust (I	B11)	of LRR H)	Hydric \$	Soil Present? Yes No Stators (minimum of two required) Surface Soil Cracks (B6)
2.5 cm 5 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of o	t (S3) (LRR I	ed; check all tha	<i>t apply)</i> Salt Crust (I Aquatic Fau	B11) una (B13)	of LRR H)	Hydric \$	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
2.5 cm 5 cm Restrictive I Type: Depth (ince Remarks: HYDROLOG Wetland Hyd Primary Indice Surfa High Satur	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of object (A1) Water Table (A2) ration (A3)	t (S3) (LRR I	ed; check all tha	<i>t apply)</i> Salt Crust (I Aquatic Fau Hydrogen S	B11) una (B13)	of LRR H) Sor (C1)	Hydric \$	Astors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
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2.5 cm 5 cm Restrictive I Type: Depth (inc) Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of of observed) water (A1) Water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)	t (S3) (LRR I	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not	B11) una (B13) sulfide Odo Water Ta zospheres c tilled) f Reduced	of LRR H) So or (C1) soble (C2) on Living Roots (C3)	Hydric s	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
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2.5 cm 5 cm Restrictive I Type: Depth (ince Remarks: HYDROLOG Wetland Hyd Primary Indice Surfa High Satur Wate Sedir Drift I Algal Iron I Inund	Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) Ches): Grading Indicators: Cators (minimum of of the Cators (Minimum of the Cators	t (S3) (LRR I	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence of	B11) una (B13) sulfide Odo water Ta cospheres o tilled) f Reduced Surface (C	of LRR H) So or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indica	stors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2)
2.5 cm 5 cm Restrictive I Type: Depth (ince Remarks: HYDROLOG Wetland Hyd Primary Indice Surfa High Satur Wate Sedir Drift I Algal Iron I Inunct Wate	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of of the cators (Minimum of the cator	t (S3) (LRR I	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence of	B11) una (B13) sulfide Odo water Ta cospheres o tilled) f Reduced Surface (C	of LRR H) So or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indica	stors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) X FAC-Neutral Test (D5)
2.5 cm 5 cm Restrictive I Type: Depth (ince Remarks: HYDROLOG Wetland Hyd Primary Indice Surfa High Satur Wate Sedir Drift I Algal Iron I Inunce	m Mucky Peat or Pea Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of of other of the other) cators (Minimum of other)	t (S3) (LRR I	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence of	B11) una (B13) sulfide Odo twater Ta cospheres o tilled) f Reduced Surface (C	of LRR H) So or (C1) able (C2) on Living Roots (C3) I Iron (C4)	econdary Indica	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) X FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)
2.5 cm 5 cm 7 cm Restrictive I Type: Depth (ince Remarks: HYDROLOG Wetland Hyd Primary Indice Surfa High Satur Wate Sedir Drift I Algal Iron I Inunce Wate Field Observ	m Mucky Peat or Pea Mucky Peat or Pea Layer: (if observed) ches): drology Indicators: cators (minimum of observed) water Table (A2) ration (A3) or Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) dation Visible on Aerer-Stained Leaves (Evations: er Present?	t (S3) (LRR I	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence of Thin Muck S Other (Expla	B11) una (B13) sulfide Odo Water Ta cospheres of tilled) f Reduced Surface (Cain in Ren	of LRR H) Solution (C1) Solution Living Roots (C3) I Iron (C4) C7) Solution (C4)	econdary Indica	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) X FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Determinati	ion Data Form	ı - Great Plains Regio	n	
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	7/30/2019
Applicant/Owner: Wyoming Dept. of Transportation	_	State: WY	Sampling Point:	S-83
Investigator(s): R. Newton, D. Soucy		Section, T	ownship, Range: S1 1	1 T13N R67W
Landform (hillslope, terrace, etc.): swale	Local Relief <i>(co</i>	ncave, convex, none): c	oncave	Slope (%): 0-3
Subregion (LRR): G - Western Great Plains	Lat. 22452	20.4531 Long:	740244.8865	Datum: WY E
Soil Map Unit Name: Ipson-Evanston complex, 6 to 30 percent	t slopes	NW	I Classification:	PEMA/PEMC
Are climatic/hydrologic conditions on the site typical for this time	of year? Yes	X No(If n	o, explain in Remarks	5)
Are Vegetation, Soil, or Hydrologysign	nificantly disturbed? A	re "Normal Circumstances" p	resent? Yes	X No
Are Vegetation , Soil , or Hydrology nat	urally problematic?	(If needed, expla	ain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map showing samplir	ng point locations, tr	ansects, important features	s, etc.	
Hydrophytic Vegetation Present? Yes X No				
Hydric Soil Present? Yes X No	Is the Sai	mpled Area within a Wetland	? Yes	X No
Wetland Hydrology Present? Yes X No			_	
Remarks:				
Remarks:				
Depressional palustrine scrub-shrub wetland PSS-4 within PEM-	-27.			
VEGETATION - Use scientific names of plants.				
<u>'</u>	minant Indicator	Dominance Test Workshe	et:	
	ecies? Status	Number of Dominant Specie		
1	<u> </u>	That Are OBL, FACW, or FA	AC:	2 (A)
2		(excluding FAC-):		
3		Total Number of Dominant		
4		Species Across All Strata:	<u>—</u>	2 (B)
5				
	al Cover	Percent of Dominant Specie		4000/
Sapling/Shrub Stratum (Plot size: 15x15 ft)	V	That Are OBL, FACW, or FA	AC:	100% (A/B)
1. Salix exigua 25 2. Salix melanopsis 8	Y FACW FACW	Prevalence Index Worksho		
3.	N PACW	Total % Cover of		Multiply by:
4.		OBL species	75 x 1 =	
5.		FACW species	33 x 2 =	
	al Cover	FAC species	0 x 3 =	0
Herb Stratum (Plot size: 5x5 ft)		FACU species	0 x 4 =	0
1. Typha angustifolia 75	Y OBL	UPL species	0 x 5 =	0
2		Column Totals:	108 (A)	141 (B)
3			nce Index = B/A =	1.3
4		Hydrophytic Vegetation In		
5			for Hydrophytic Vege	tation
6		X 2. Dominance X 3. Prevalence		
<u></u>			cal Adaptations¹ (Prov	vide sun-
8			n Remarks or on a se	
O. Control Control		Problematic H	lydrophytic Vegetation	n (Explain)
,	al Cover		., a. op., j.ao i ogotano.	(=//p/s///
Woody Vine Stratum (Plot size: 30x30 ft)				
1.		¹ Indicators of hydric	soil and wetland hydrol	ngy must he
2.		present, unless distu	•	ogy must be
0 = T	otal Cover			
% Bare Ground in Herb Stratum 0 %		Hydrophytic Vegetat	tion Present?	X Yes No
			_	_
Remarks:		•		

SOIL

S-83

Sampling Point:

(inches)	Matrix			Redox F	eatures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-1	10 YR 3/1	100					muck	
1-15	10 YR 3/1	100					Clay Loam	
¹ Type: C=Co	oncentration, D=Depl	etion, RM=R	Reduced Matrix,	CS=Cove	ered or Co	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil		•	•					ors for Problematic Hydric Soils ³ :
•	sol (A1)			Sand	lv Gleved I	Matrix (S4)		. cm Muck (A9) (LRR I, J)
	Epipedon (A2)		_		ly Redox (Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		_		ped Matrix	•		Park Surface (S7) (LRR G)
	ogen Sulfide (A4)		_		•	Mineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LR I	R F)	_			Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, C	•	_		eted Matrix	` ,	F	Reduced Vertic (F18)
	eted Below Dark Surf		_		x Dark Su			Red Parent Material (TF2)
	Dark Surface (A12)	(/	_			Surface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S1))	_		x Depress	` '		ors of hydrophylic vegetation and
	m Mucky Peat or Pea		G, H)		•	oressions (F16)		I hydrology must be present, unless
	Mucky Peat or Peat		_		LRA 72 & 73			ed or problematic.
Restrictive I	_ayer: (if observed)							
Type:	Layer: (# observea)							
•	hes):						Hydric So	il Present? Yes X No
Depth (inc	hes):						Hydric So	il Present? Yes X No
•	hes):						Hydric So	il Present? Yes X No
Depth (inc	hes):						Hydric So	il Present? Yes X No
Depth (inc							Hydric So	il Present? Yes X No
Depth (incomments:							Hydric So	il Present? Yes X No
Depth (incomplete incomplete inco	Y	ne is require	d; check all that	t apply)		S		Il Present? Yes X No
Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic	Y drology Indicators:	ne is require		<i>t apply)</i> Salt Crust	(B11)	s		
Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic X Surfa	Y drology Indicators: cators (minimum of o	ne is require		Salt Crust	(B11) auna (B13)			rs (minimum of two required)
Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic X Surfa X High	Y drology Indicators: cators (minimum of or	ne is require		Salt Crust Aquatic Fa	` '			rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10)
Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic X Surfa X High X Satur	drology Indicators: cators (minimum of or ce Water (A1) Water Table (A2)	ne is require		Salt Crust Aquatic Fa Hydrogen	auna (B13)	lor (C1)		rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Depth (incomplete incomplete inco	Y drology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) cation (A3)	ne is require		Salt Crust Aquatic Fa Hydrogen Dry-Seaso	auna (B13) Sulfide Oc on Water T	lor (C1)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic X Surfa X High X Satur Wate Sedir	Y drology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) cation (A3) r Marks (B1)	ne is require		Salt Crust Aquatic Fa Hydrogen Dry-Seaso	auna (B13) Sulfide Oc on Water T nizospheres	lor (C1) able (C2)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living
Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic X Surfa X High X Satur Wate Sedir Drift I	drology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) cation (A3) r Marks (B1) ment Deposits (B2)	ne is require		Salt Crust Aquatic Fa Hydrogen Dry-Seaso Dxidized Rh where no	auna (B13) Sulfide Oco on Water T nizospheres ot tilled)	lor (C1) able (C2)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Depth (ind Remarks: HYDROLOG Wetland Hyd Primary Indic X Surfa X High X Satur Wate Sedir Drift I Algal	drology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) cation (A3) or Marks (B1) ment Deposits (B2) Deposits (B3)	ne is require		Salt Crust Aquatic Fa Hydrogen Dry-Seaso Dxidized Rh where no	auna (B13) Sulfide Oco on Water T nizospheres ot tilled)	lor (C1) able (C2) on Living Roots (C3) d Iron (C4)	econdary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8)
Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic X Surfa X High X Satur Wate Sedir Drift I Algal Iron I	r Marks (B1) Deposits (B3) Mat or Crust (B4)			Salt Crust Aquatic Fa Hydrogen Dry-Seaso Dxidized Rr where no Presence Thin Muck	sulfide Octor Water This property of Reduce	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	secondary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS
Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic X Surfa X High X Satur Wate Sedir Drift I Algal Iron I Inunc	drology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	al Imagery (E		Salt Crust Aquatic Fa Hydrogen Dry-Seaso Dxidized Rr where no Presence Thin Muck	sauna (B13) Sulfide Ocon Water Tonizospheres of tilled) of Reduce	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	secondary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2)
Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic X Surfa X High X Satur Wate Sedir Drift I Algal Iron I Inunc Wate	ry drology Indicators: cators (minimum of or	al Imagery (E		Salt Crust Aquatic Fa Hydrogen Dry-Seaso Dxidized Rr where no Presence Thin Muck	sauna (B13) Sulfide Ocon Water Tonizospheres of tilled) of Reduce	lor (C1) able (C2) on Living Roots (C3) d Iron (C4) C7)	secondary Indicato	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5)
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Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic X Surfa X High X Satur Wate Sedir Drift I Algal Iron I Inunc Wate Field Obsert Surface Wate Water Table	drology Indicators: cators (minimum of or ce Water (A1) Water Table (A2) ration (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) lation Visible on Aeria r-Stained Leaves (B9) vations: er Present?	al Imagery (E	YesYes	Salt Crust Aquatic Fa Hydrogen Dry-Seasc Dxidized Rh where no Presence Thin Muck Dther (Exp	auna (B13) Sulfide Ocon Water Tonizospheres of tilled) of Reduce a Surface (allocations in Reduce)	lor (C1) fable (C2) on Living Roots (C3) d Iron (C4) C7) marks) Depth (inches)	econdary Indicato X X	rs (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F) Wetland Hydrology

Wetland D	Determinatio	on Data F	orm - Grea	at Plains Reg	jion	
Project/Site: I-25/I-80 Interchange		City/Count	y: Cheyenne/L a	aramie	Sampling Date:	7/30/2019
Applicant/Owner: Wyoming Dept. of Trai	nsportation			State: WY	Sampling Point:	S-84
Investigator(s): R. Newton, D. Soucy				Section	n, Township, Range: <u>S1</u>	1 T13N R67W
Landform (hillslope, terrace, etc.): ditch slo	ре	Local Re	lief (concave, co	onvex, none):	none	Slope (%): 45
Subregion (LRR): G - Western Great Plair	ıs	Lat.	224519.7799	Long:	740249.9278	Datum: WY E
Soil Map Unit Name: Ipson-Evanston comple	x, 6 to 30 percent s	slopes			IWI Classification:	UPL
Are climatic/hydrologic conditions on the site ty	pical for this time of	of year?	Yes X	No(If no, explain in Remark	s)
Are Vegetation, Soil, or Hyd	rologysignif	ficantly disturb	bed? Are "Norm	al Circumstances	s" present? Yes	X No
Are Vegetation , Soil , or Hyd	rology natur	ally problema	atic?	(If needed, ex	xplain any answers in Re	emarks.)
SUMMARY OF FINDINGS - Attach site map s	showing sampling	point location	ons, transects,	important featu	ires, etc.	
Hydrophytic Vegetation Present? Yes	No X					
Hydric Soil Present? Yes	No X	Is	the Sampled Are	ea within a Wetla	ind? Yes	No X
Wetland Hydrology Present? Yes	No X		•		-	
Remarks:						
Paired upland point for PSS-4.						
VEGETATION - Use scientific names of plan	ts.					
<u>Tree Stratum</u> (Plot size: 30x30 ft)	Absolute Domi % Cover Spec			nce Test Works of Dominant Spe		
1	70 COVEI OPEC	nes: Otal		OBL, FACW, o		0 (A)
2				ng FAC-) :		(A)
3.				ımber of Domina	m#	
4.				Across All Strata		1 (B)
5.						. (5)
·	0 = Total	Cover		of Domain and Co.	!	
Sapling/Shrub Stratum (Plot size: 15x15				of Dominant Spe OBL, FACW, o		0% (A/B)
1	/ / /			, , , , , , ,		(, 4, 5)
2.			Prevale	nce Index Work	sheet:	
3.				Total % Cover	of:	Multiply by:
4.			OBL	species	0 x 1 =	
5.			FACW	species	7 x 2 =	= 14
	0 = Total	Cover	FAC	species	0 x 3 =	= 0
Herb Stratum (Plot size: 5x5 ft)			FACU	species	0 x 4 =	= 0
1. Euphorbia esula	85 Y	/ N	II UPL	species	85 x 5 =	425
2. Agrostis stolonifera	7 N	N FAC	COlumn	Totals:	92 (A)	439 (B)
3.				Preva	alence Index = B/A =	4.8
4			Hydrop	hytic Vegetatior	n Indicators:	
5				1. Rapid T	est for Hydrophytic Vege	etation
6.					nce Test is >50%.	
7					nce Index is <3.01	
8				•	ogical Adaptations¹ (Pro	•
9				porting dat	a in Remarks or on a se	parate sneet)
0				Problemat	ic Hydrophytic Vegetatio	n (Explain)
	92 = Total	Cover				
Woody Vine Stratum (Plot size: 30x30 ft)					
1					lric soil and wetland hydro	logy must be
2				present, unless di	isturbed or problematic.	
0/ Dana Chaund in Hart Street		tal Cover		n do terr		V. V.
% Bare Ground in Herb Stratum 8	%			Hydrophytic Veg	etation Present?	Yes X No
Remarks:						
Species with no indicator (NI) are treated as UF	^∟ tor this analysis.					

SOIL Sampling Point:

S-84

Depth	Matrix			Redox Fe	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10 YR 3/2	100					Clay	
6-16								road fill
								_
								_
								_
								_
¹ Type: C=Co	oncentration, D=Dep	oletion. RM=l	Reduced Matrix	CS=Cover	ed or Coat	ted Sand Grains.	² Location: P	L=Pore Lining, M=Matrix
Hydric Soil	•							ators for Problematic Hydric Soils ³ :
•	sol (A1)			Sandv	Gleyed M	atrix (S4)		1 cm Muck (A9) (LRR I, J)
	Epipedon (A2)		-		Redox (S			Coast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)		_		ed Matrix (•		Dark Surface (S7) (LRR G)
	ogen Sulfide (A4)		-		,	ineral (F1)		High Plains Depressions (F16)
	fied Layers (A5) (LF	RF)	-		Gleyed M	, ,		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F ,	,	-		ed Matrix	• •		Reduced Vertic (F18)
	eted Below Dark Sur		-		Dark Surf	` '		Red Parent Material (TF2)
	Dark Surface (A12)	` ,	_			urface (F7)		Other (Explain in Remarks)
	y Mucky Mineral (S	,	-		Depression	` '	3	_
	y maony minorai (e		-			ressions (F16)		cators of hydrophylic vegetation and and hydrology must be present, unless
	m Mucky Peat or Pe	at (S2) (L R 6	(G.H)			00010110 (1 10)	*******	a, a. o.og,ast be present, aess
2.5 c	m Mucky Peat or Pe Mucky Peat or Peat		_			of LRR H)	distu	rbed or problematic.
2.5 cm	Mucky Peat or Pea	t (S3) (LRR F	_		RA 72 & 73	of LRR H)	distu	rbed or problematic.
2.5 cm	-	t (S3) (LRR F	_			of LRR H)	distu	rbed or problematic.
2.5 cm 5 cm Restrictive I	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR F	_			of LRR H)		
2.5 cm 5 cm	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR F	_			of LRR H)		Soil Present? Yes No
2.5 cm 5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR F	_			of LRR H)		
2.5 cm 5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat Layer: (if observed)	t (S3) (LRR F	_			of LRR H)		
2.5 cm 5 cm Restrictive I Type: Depth (inco	Mucky Peat or Peat Layer: (if observed) thes):	t (S3) (LRR F	_			of LRR H)		
2.5 cm 5 cm Restrictive I Type: Depth (inc	Mucky Peat or Peat Layer: (if observed) thes):	t (S3) (LRR F	_			of LRR H)		
2.5 cm 5 cm Restrictive I Type: Depth (incomplete in the complete in the compl	Mucky Peat or Peat Layer: (if observed) thes): Y drology Indicators:	t (S3) (LRR F	F)	(MLR			Hydric S	Soil Present? Yes No X
2.5 cm 5 cm Type: Depth (incomplete incomplete incomple	Mucky Peat or Peat Layer: (if observed) thes): GY drology Indicators: cators (minimum of cators)	t (S3) (LRR F	ed; check all tha	(MLR	RA 72 & 73 (Hydric S	Soil Present? Yes No _ ?
2.5 cm 5 cm 7 cm Restrictive I Type: Depth (incomplete in the complete in the	Mucky Peat or Peat Layer: (if observed) Ches): Y drology Indicators: cators (minimum of o	t (S3) (LRR F	ed; check all tha	(MLR t apply) Salt Crust (I	B11)		Hydric S	Soil Present? Yes No Z
2.5 cm 5 cm Restrictive I Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High	Mucky Peat or Peat Layer: (if observed) thes): drology Indicators: cators (minimum of observed) water (A1) Water Table (A2)	t (S3) (LRR F	ed; check all tha	(MLR t apply) Salt Crust (I	B11) Ina (B13)	S	Hydric S	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8)
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2.5 cm 5 cm 7 ype: Depth (incomplete limits) Primary Indicomplete limits Surfation High Satur Wate Sedir Drift I Algal Iron I Inunc	Mucky Peat or Peat Layer: (if observed) Shes): Grading Indicators: Cators (minimum of of other of other of other of other of other of other other of other other of other ot	t (S3) (LRR F	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Oxidized Rhiz (where not Presence of	B11) Ina (B13) Iulfide Odo I Water Ta cospheres o tilled) f Reduced Surface (C	or (C1) ble (C2) n Living Roots (C3) Iron (C4)	Hydric S	stors (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2)
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2.5 cm 5 cm 7 cm Restrictive I Type: Depth (inco Remarks: HYDROLOG Wetland Hyd Primary Indic Surfa High Satur Wate Sedir Drift I Algal Iron I Inunc Wate Field Observ Surface Wate Water Table	Mucky Peat or Peat Layer: (if observed) Shes): Grading Indicators: Cators (minimum of of other of other of other of other of other of other other of other	t (S3) (LRR F	ed; check all tha	t apply) Salt Crust (I Aquatic Fau Hydrogen S Dry-Season Dxidized Rhiz (where not Presence of Thin Muck S Other (Expla	B11) una (B13) ulfide Odo Water Ta cospheres o tilled) f Reduced Surface (C ain in Rem	or (C1) ble (C2) n Living Roots (C3) Iron (C4) 7) narks)	Hydric S	Ators (minimum of two required) Surface Soil Cracks (B6) Sparsley Vegetated Concave Surf. (B8) Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) (where tilled) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Geomorphic Position (D2) FAC-Neutral Test (D5) Frost-Heave Hummocks (D7) (LRR F)

Wetland Determina	tion Data Form	ı - Great Plains Region		
Project/Site: I-25/I-80 Interchange	City/County: Che	yenne/Laramie	Sampling Date:	7/30/2019
Applicant/Owner: Wyoming Dept. of Transportation		State: WY	Sampling Point:	S-85
Investigator(s): R. Newton, D. Soucy		Section, To	wnship, Range: S1 1	1 T13N R67W
Landform (hillslope, terrace, etc.): depression	Local Relief (co	ncave, convex, none): cor	ncave	Slope (%): (
Subregion (LRR): G - Western Great Plains	Lat. 2240	35.7547 Long:	739940.1808	Datum: WY E
Soil Map Unit Name: Ipson-Evanston complex, 6 to 30 perce	nt slopes	NWI	Classification:	UPL
Are climatic/hydrologic conditions on the site typical for this tim	ne of year? Yes	X No (If no,	explain in Remarks	s)
Are Vegetation , Soil , or Hydrology si	gnificantly disturbed? A	re "Normal Circumstances" pre	esent? Yes	X No
<u> </u>	aturally problematic?		n any answers in Re	emarks)
SUMMARY OF FINDINGS - Attach site map showing sample				marko.)
	ing point locations, tr	ansects, important reatures,	etc.	
<u> </u>	la tha Car		Vas	V N-
Hydric Soil Present? Yes X No	is the Sai	mpled Area within a Wetland?	Yes_	X No
Wetland Hydrology Present? Yes X No				
Remarks:				
Depressional palustrine emergent wetland PEM-28 connected	via culvert.			
VEGETATION - Use scientific names of plants.				
	ominant Indicator	Dominance Test Worksheet		
Tree Stratum (Plot size: 30x30 ft) % Cover S	pecies? Status	Number of Dominant Species That Are OBL, FACW, or FAC		4 (1)
1		(excluding FAC-):	<i></i>	1 (A)
^{2.}		i ,		
3		Total Number of Dominant		4 (p)
4		Species Across All Strata:		(B)
5 0 = To	tal Cover			
	lai Covei	Percent of Dominant Species		4000/ (4/5)
Sapling/Shrub Stratum (Plot size: 15x15 ft)		That Are OBL, FACW, or FAC	· —	100% (A/B)
<u> </u>	<u> </u>	Daniel and the day Warded	4-	
^{2.}		Prevalence Index Workshee Total % Cover of:		N 4. ul+imby by a
3			0 x 1 =	Multiply by:
 		OBL species		
5	tal Cover	FACW species FAC species	98 x 2 = 0 x 3 =	
Herb Stratum (Plot size: 5x5 ft)	tai Covei	· ·	$\frac{0}{0}$ $\times 4 =$	
1. Juncus balticus 98	Y FACW	FACU species UPL species	$\frac{0}{0}$ $\frac{x}{5}$ =	
1. Junicus ballicus 90	TACW	Column Totals:		
3			98 (A) e Index = B/A =	196 (B) 2.0
4.		Hydrophytic Vegetation Indi		2.0
5.			or Hydrophytic Vege	tation
6.		X 2. Dominance 1		iation
7		X 3. Prevalence I		
8.			al Adaptations¹ (Prov	vide sup-
9.			Remarks or on a se	•
1 ³		Problematic Hy	drophytic Vegetation	n (Evolain)
,	tal Cover		aropriyao vogetalioi	i (Explair)
Woody Vine Stratum (Plot size: 30x30 ft)	tai oovoi			
1		1		
		¹ Indicators of hydric so present, unless disturb		ogy must be
0 =	Total Cover	present, unless disturb	ed of problematic.	
% Bare Ground in Herb Stratum 2 %	Total Covel	Hydrophytic Vegetation	n Present?	X Yes No
Z /0		inyuropinyur vegetatit		<u> </u>
Pomorko				
Remarks:				

SOIL

S-85

Sampling Point:

Profile Desci	ription: (Describe to	the depth ne	eeded to docume	nt the inc	licator or	confirm the abser	nce of indicators.)	
Depth	Matrix		F	Redox Fe	atures			
(inches)	Color (moist)	% (Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-1	10 YR 2/1	100					muck	
1-6	10 YR 4/4	100					Sand	
6-8	10 YR 2/1	100					Clay	
8-15	10 YR 3/2	100					Sandy Clay Loan	
¹ Type: C=Co	ncentration, D=Depl	etion, RM=R	educed Matrix, C	S=Cover	ed or Co	ated Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil II	ndicators						Indicato	ors for Problematic Hydric Soils ³ :
Histos	ol (A1)			Sandy	Gleyed	Matrix (S4)	1	cm Muck (A9) (LRR I, J)
Histic	Epipedon (A2)			— Sandy	Redox (S5)	 c	Coast Prairie Redox (A16) (LRR F, G, H)
Black	Histic (A3)			Strippe	ed Matrix	(S6)		Park Surface (S7) (LRR G)
Hydro	gen Sulfide (A4)			 Loamy	/ Mucky I	Mineral (F1)	 -	ligh Plains Depressions (F16)
Stratif	ied Layers (A5) (LRI	R F)		Loamy	/ Gleyed	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
X 1 cm l	Muck (A9) (LRR F, G	S, H)		 Deplet	ed Matri	k (F3)	R	deduced Vertic (F18)
Deple	ted Below Dark Surfa	ace (A11)		Redox	Dark Su	rface (F6)	R	led Parent Material (TF2)
Thick	Dark Surface (A12)			 Deplet	ed Dark	Surface (F7)	 c	Other (Explain in Remarks)
Sandy	Mucky Mineral (S1))		— Redox	Depress	sions (F8)	3Indicate	ors of hydrophylic vegetation and
2.5 cn	n Mucky Peat or Pea	at (S2) (LRR	G, H)	— High P	Plains De	pressions (F16)		hydrology must be present, unless
5 cm l	Mucky Peat or Peat	(S3) (LRR F)		— (MLF	RA 72 & 7	3 of LRR H)	disturbe	ed or problematic.
Restrictive I	ayer: (if observed)							
Type:	ayer: (# observed)							
Depth (incl	nes) ·						Hydric Soi	il Present? Yes X No
							Tryunc doi	Tes X No
Remarks:								
HYDROLOGY	(
Wetland Hyd	rology Indicators:							
Primary Indica	ators <i>(minimum of or</i>	ne is required	d; check all that a	pply)		S	Secondary Indicator	rs (minimum of two required)
Surfac	ce Water (A1)		Sa	It Crust (I	B11)			Surface Soil Cracks (B6)
High V	Vater Table (A2)		Aq	uatic Fau	ına (B13)		Sparsley Vegetated Concave Surf. (B8)
Satura	ation (A3)		Hy	drogen S	Sulfide Od	dor (C1)		_Drainage Patterns (B10)
Water	Marks (B1)		Dr	y-Season	Water T	able (C2)		Oxidized Rhizospheres on Living Roots (C3) (where tilled)
Sedim	ent Deposits (B2)		Oxi	dized Rhiz	zospheres	on Living Roots (C3))	Roots (C3) (where thied)
Drift D	eposits (B3)		(w	here not	tilled)			Crayfish Burrows (C8)
Algal I	Mat or Crust (B4)		Pre	esence o	f Reduce	d Iron (C4)		Saturation Visible on Aerial Imagery (CS
Iron D	eposits (B5)		XTh	in Muck S	Surface (C7)	X	Geomorphic Position (D2)
Inunda	ation Visible on Aeria	al Imagery (E	37) Oti	her (Expl	ain in Re	marks)	X	FAC-Neutral Test (D5)
Water	-Stained Leaves (B9	9)						Frost-Heave Hummocks (D7) (LRR F)
Field Observ	ations:							
Surface Wate	r Present?		Yes	No	X_	Depth (inches)		Wetland Hydrology
Water Table I	Present?		Yes	No	X	Depth (inches)		Present?
Saturation Pre	esent? (includes cap	illary fringe)	Yes	No	Х	Depth (inches)		X Yes No
Remarks:								

Wetland	l Determinat	tion Da	ta Forn	า - Grea	at Plains Re	gion		
Project/Site: I-25/I-80 Interchange		City/0	County: Che	eyenne/La	aramie	Sampling Da	te: 7/30/2019	Э
Applicant/Owner: Wyoming Dept. of T	ransportation				State: W	Y Sampling Poi	nt: S-86	
Investigator(s): R. Newton, D. Soucy					Secti	on, Township, Range:	S11 T13N R67W	'
Landform (hillslope, terrace, etc.): minor	r slope	Loc	al Relief (co	oncave, co	onvex, none):	none	Slope (%): 0	-2
Subregion (LRR): G - Western Great Pl	lains	Lat.	2240	28.3919	Long:	739940.1463	Datum: WY	Е
Soil Map Unit Name: Ipson-Evanston comp	plex, 6 to 30 perce	nt slopes				NWI Classification:	UPL	
Are climatic/hydrologic conditions on the site	typical for this tim	e of year?	Yes	X	No	(If no, explain in Rem	arks)	
Are Vegetation, Soil, or H	lydrologysiç	gnificantly o	disturbed? A	re "Norm	al Circumstanc	es" present? Yes	_X No)
Are Vegetation , Soil , or H	lydrology na	turally prob	blematic?		(If needed,	explain any answers i	n Remarks.)	
SUMMARY OF FINDINGS - Attach site ma	p showing sampl	ing point l	ocations, ti	ransects,	important fea	tures, etc.		
Hydrophytic Vegetation Present? Yes	No X							
Hydric Soil Present? Yes	No X		Is the Sa	mpled Are	ea within a Wet	land? Y	es No X	
Wetland Hydrology Present? Yes	No X			•				-
Remarks:								
Paired upland point for PEM-28.								
VEGETATION - Use scientific names of pl	ants.							
T Charles (Dist sine) 20:20 ft		ominant	Indicator		nce Test Worl			
<u>Tree Stratum</u> (Plot size: 30x30 ft)	% Cover S	pecies?	Status		of Dominant S OBL, FACW,	•	0	(4)
1					ng FAC-):	orrac.	0	(A)
3.								
4.					ımber of Domir Across All Stra		1	(B)
5.				Opecies	ACIOSS All Oll	ata.		(D)
J	0 = Tot	tal Cover						
- Sapling/Shrub Stratum (Plot size: 15:	x15 ft)	tai oovoi			of Dominant S OBL, FACW,	•	0% (A	4/B)
1	X1311)			That Aid	ODL, I ACW,	orrac.	<u> </u>	4/ D)
2				Provalo	nce Index Wo	rkshoot:		
3.				litevale	Total % Cove		Multiply by:	
4				OBL	species		1 = 0	—
5				FACW	species		2 = 0	-
·· <u> </u>	0 = Tot	tal Cover		FAC	species		3 = 0	-
Herb Stratum (Plot size: 5x5 ft)				FACU	species		4 = 88	-
1. Bromus inermis	65	Υ	UPL	UPL	species		5 = 365	-
2. Cirsium arvense	12	N	FACU	Column	•		(A) 453	– (B)
3. Euphorbia esula	8	N	NI			valence Index = B/A =	4.8	_ `-'
4. Elymus trachycaulus	10	N	FACU	Hydrop	hytic Vegetation			
5.				' '	•	Test for Hydrophytic \	/egetation	
6.						ance Test is >50%.		
7.					3. Preval	ence Index is <3.01		
8.					4. Morph	ological Adaptations¹ (Provide sup-	
9.					porting d	ata in Remarks or on a	a separate sheet)	
0.					Problema	atic Hydrophytic Veget	ation (Explain)	
	95 = Tot	tal Cover						
Woody Vine Stratum (Plot size: 30x30) ft)							
1.					¹ Indicators of h	ydric soil and wetland hy	drology must be	
2.						disturbed or problemati		
	0 =	Total Cove	r					
% Bare Ground in Herb Stratum	5 %				Hydrophytic Ve	getation Present?	Yes X	No
	_							
Remarks:				1				
Species with no indicator (NI) are treated as	UPL for this analy	sis.						

SOIL

Sampling Point: S-86

Profile Desc	ription: (Describe to	the depth ne	eded to docu	ıment the in	dicator or	confirm the absent	ce of indicators.)	
Depth	Matrix			Redox F	eatures			
(inches)	Color (moist)	% C	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10 YR 3/2	100					clay loam	
2-6	10 YR 4/4	100					sand	
6-18	10 YR 4/4	100					sand	
	<u> </u>							
¹ Type: C=Co	oncentration, D=Dep	etion, RM=R	educed Matri	x, CS=Cove	red or Coa	ated Sand Grains.	² Location: PL=P	ore Lining, M=Matrix
Hydric Soil I	ndicators	•		•				s for Problematic Hydric Soils ³ :
l -	sol (A1)			Sand	v Gleved N	Matrix (S4)		cm Muck (A9) (LRR I, J)
	Epipedon (A2)				y Redox (S			ast Prairie Redox (A16) (LRR F, G, H)
	Histic (A3)				ed Matrix	•		rk Surface (S7) (LRR G)
	ogen Sulfide (A4)					/lineral (F1)		gh Plains Depressions (F16)
	fied Layers (A5) (LR	R F)			-	Matrix (F2)		(LRR H outside of MLRA 72 & 73)
	Muck (A9) (LRR F, (,			ted Matrix	` ,		duced Vertic (F18)
	eted Below Dark Surf				x Dark Su			d Parent Material (TF2)
	Dark Surface (A12)	ace (ATT)				Surface (F7)		her (Explain in Remarks)
	, ,	١				• •		
	y Mucky Mineral (S1 m Mucky Peat or Pea		С П/		x Depress	oressions (F16)		rs of hydrophylic vegetation and hydrology must be present, unless
	Mucky Peat or Peat			<u> </u>	RA 72 & 73	, ,		or problematic.
3 6111	Mucky Feat Of Feat	(33) (LKK F)		(IVIL	NA /2 Q /3	OI LKK H)		·
Restrictive L	ayer: (if observed)							
Type:								
Depth (inc	hes):						Hydric Soil	Present? Yes No X
Remarks:								
HYDROLOG	Υ							
	drology Indicators:							
_	ators (minimum of o	ne is reauired	l: check all th	at apply)		Se	econdary Indicators	(minimum of two required)
-	ce Water (A1)		.,	Salt Crust	(B11)			Surface Soil Cracks (B6)
	Water Table (A2)			Aquatic Fa	` '			Sparsley Vegetated Concave Surf. (B8)
	ation (A3)			Hydrogen S				Drainage Patterns (B10)
	r Marks (B1)			Dry-Season		,		Oxidized Rhizospheres on Living
	nent Deposits (B2)			- 1		on Living Roots (C3)		Roots (C3) (where tilled)
	Deposits (B3)			(where no	-	on Living Roots (CS)		Crayfish Burrows (C8)
	Mat or Crust (B4)			Presence of	•	d Iron (C4)		Saturation Visible on Aerial Imagery (C9)
— ·	Deposits (B5)			Thin Muck		` ,		Geomorphic Position (D2)
	ation Visible on Aeri	al Imagery (R	7)	Other (Exp	,	,		FAC-Neutral Test (D5)
	r-Stained Leaves (B		'' <u> </u>	- Other (Exp	iaiii iii iXei	ilaiks)		Frost-Heave Hummocks (D7) (LRR F)
		· /						1 1000-1 leave Trummouns (DT) (LINK F)
Field Observ								
Surface Wate			Yes	N		Depth (inches)		Wetland Hydrology
Water Table			Yes	N		Depth (inches)		Present?
Saturation Pr	resent? (includes cap	oillary fringe)	Yes	N	o X	Depth (inches)		Yes X No
Remarks:								

Special Content Special Co	Wetland	Determin	ation Da	ata Forn	า - Grea	at Plains Ro	egion		
Manual M	Project/Site: I-25/I-80 Interchange		City/	County: Che	eyenne/La	aramie	Sampling	Date:	7/30/2019
Stocked Stoc	Applicant/Owner: Wyoming Dept. of Tr	ansportation				State: V	VY Sampling	Point:	S-87
Subveying (LRR):	Investigator(s): R. Newton, D. Soucy					Sect	tion, Township, Ran	nge: S11 T	13N R67W
Soil Map Unit Name:	Landform (hillslope, terrace, etc.): depre	ssion	Lo	cal Relief <i>(c</i> d	oncave, co	onvex, none):	concave	SI	ope (%): 0-:
ver climatichlydrologic conditions on the site typical for this time of year? Yes X No (// no. explain in Remarks) ver Veegetation Soil or Hydrology significantly disturbed 2 for "Normal Circumstances" present? Yes X No ver Veegetation Soil or Pythydropyty significantly disturbed 2 for "Normal Circumstances" present? Yes X No or Hydrology Inaturally problemate? (// needed, explain any answers in Remarks.) SUMMARY OF FNDINGS - Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No X No Yes No X No Yedison Hydrology Present? Yes No X No X No Yes No X No	Subregion (LRR): G - Western Great Pla	ains	Lat.	2245	70.4734	Long	739076.693	9 1	Datum: WY F
ver Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No ver Vegetation Soil or Hydrology maturally problematic? (If needed, explain any answers in Remarks.) Wathward Yor FINDINGS - Attach is the map showing sampling point locations, transects, important features, etc. Hydrophysic Vegetation Present? Yes X No X Is the Sampled Area within a Wetland? Yes No X VetWatand Hydrology Present? Yes X No X Is the Sampled Area within a Wetland? Yes No X VetWatand Hydrology Present? Yes X No X Is the Sampled Area within a Wetland? Yes No X VetWatand Hydrology but lacks hydric soils. No channel actual soil and the sample of the sam	Soil Map Unit Name: Ipson-Evanston comp	lex, 6 to 30 per	cent slopes			-	NWI Classification	n:	UPL
Vev Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)	Are climatic/hydrologic conditions on the site	typical for this t	ime of year?	Yes	. X	No	(If no, explain in F	Remarks)	
Vev Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)	Are Vegetation , Soil , or Hy	/drology	significantly	disturbed? A	re "Norm	al Circumstand	es" present? Yes		X No
SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.								rs in Rema	arks.)
Hydric Vegetation Present? Yes X No X Is the Sampled Area within a Wetland? Yes No X Yes No X Vestland Hydrology Present? Yes X No X Is the Sampled Area within a Wetland? Yes No X Yes No X Vestland Hydrology Present? Yes X No X Is the Sampled Area within a Wetland? Yes No X Yes No X Yes Mark Yes Mark Yes Mark Yes X No X Is the Sampled Area within a Wetland? Yes No X Yes No X Yes X No X Yes Mark Yes Mark Yes X No X X Yes X Yes X No X X Yes X Yes X No X X Yes X Yes X Yes X Yes X X Yes X Yes X Yes X X Yes X Yes X Yes X Yes X X Yes X X Yes X					ransects	,	, ,		
Versign Vers	-	_	F9 F	,					
Remarks: Wea mapped by NWI as PEM and NHD as channel. Area has dominant hydrophytic vegetation and wetland hydrology but lacks hydric soils. No channel actures present. ### Total Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) (excluding FAC-): Total Number of Dominant Species That Are OBL, FACW, or FAC: 2 (B) **Total Number of Dominant Species That Are OBL, FACW, or FAC: 2 (B) **Total Number of Dominant Species That Are OBL, FACW, or FAC: 2 (B) **Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) **Prevalence Index Worksheet: Total Number of Dominant Species T	- · · · · · -			Is the Sa	mnled Ar	ea within a We	atland?	Ves	No X
Remarks: Vere mapped by NWI as PEM and NHD as channel. Area has dominant hydrophytic vegetation and wetland hydrology but lacks hydric soils. No channel satures present. **Tee Stratum** (Plot size: 30x30 ft)	· -			13 1110 00	inpica Air	ca within a vvc	tiana :		_ 110
Abacolus present. ###################################	welland hydrology Present? Yes _	A NO							
### Absolute Dominant Species Statum (Plot size: 30x30 ft)	Remarks:								
		hannel. Area ha	as dominant	hydrophytic	vegetatio	n and wetland	hydrology but lacks	hydric soi	ils. No chanr
Absolute Dominant Species Stratum Plot size: 30x30 ft	•	mto.							
Number of Dominant Species Number of Dominant Species That Ave OBL, FACW, or FAC: 2 (A)	VEGETATION - Ose scientific flames of pic		Dominant	Indicator	Domina	nce Test Wor	·ksheet·		
That Are OBL, FACW, or FAC: 2 (A) (excluding FAC-):	Tree Stratum (Plot size: 30x30 ft)								
	1.		·				•		2 (
Species Across All Strata: 2 (8)	2.				(excludi	ng FAC-):			
Species Across All Strata: 2 (8)	3.				Total Nu	ımher of Domi	nant		
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)	4.								2
Prevalence Index Worksheet:	5.							-	
Prevalence Index Worksheet:	·	0 =	Total Cover		D	- f D 6	S		
Prevalence Index Worksheet:	Sanling/Shruh Stratum (Plot size: 15v						•	1	00% (4
Total % Cover of: Multiply by:	1	<u> </u>			l'ilac', av	3 3 2 2 , 1 7 (3 7)	, 6, 1, 1, 10.		(7)
Total % Cover of: Multiply by:	2	-			Provale	nce Index Wo	rkshoot:		
OBL species 20 x 1 = 20	3				litevale			M	ultiply by:
FACW Species G0 x 2 = 120	4				OBL				
Pack Stratum Plot size Sx5 ft	5.					•			
Semarks Stratum Plot size Sx5 ft Sx5	J		Total Cover			•			
Agropyron cristatum B N NI C. Lactuca serriola Column Totals: Description Totals: Descri	Herb Stratum (Plot size: 5x5 ft)		rotal Gover			•			
2. Lactuca serriola 3		8	N	NII					
Same This provided in the pr						•			
Carex lenticularis 20					Column				
Social					Hydron				2.2
X 2. Dominance Test is >50%. X 3. Prevalence Index is ≤3.0¹ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) O					linguiop	-		tic Vegetat	tion
X 3. Prevalence Index is $\leq 3.0^{1}$ 4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Noody Vine Stratum (Plot size: 30x30 ft) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Bare Ground in Herb Stratum 4 % Hydrophytic Vegetation Present? X Yes No			<u> </u>	FACW				-	.1011
4. Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Bare Ground in Herb Stratum Bare Ground in Herb Stratum Hydrophytic Vegetation Present? X Yes No	6.								
porting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Bare Ground in Herb Stratum Bare Ground in Herb Stratum Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? X Yes No	7	-					_		le sun-
Problematic Hydrophytic Vegetation (Explain) 1	8	-							
96 Total Cover 1 1 1 1 1 1 1 1 1	9					, ,		•	•
Noody Vine Stratum (Plot size: 30x30 ft) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. O = Total Cover Bare Ground in Herb Stratum 4 % Hydrophytic Vegetation Present? X Yes No	0	- 96	Total Cover				iado i iyuropriyud Ve	-yetalion (∟xpiaiii)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. O = Total Cover Hydrophytic Vegetation Present? X Yes No	Woody Vino Stratum (Plot aims)		i otai Cover						
present, unless disturbed or problematic. 0 = Total Cover Hydrophytic Vegetation Present? X Yes No	vvoody virie stratum (Piot size: 30x30	<u>11) </u>				1			
0 = Total Cover % Bare Ground in Herb Stratum 4 % Hydrophytic Vegetation Present? X Yes No	1								y must be
Remarks: Hydrophytic Vegetation Present? X Yes No	2		- Total O			present, unless	s disturbed or probler	natic.	
Remarks:	% Raro Ground in Harb Stratum		- TOTAL COVE	21		Hudranh - +! - 1	agatation Duc	v	Voc
	Mare Ground in Herb Stratum	70				nyuropnytic V	egetation Present?	<u> </u>	_ res
Species with no indicator (NI) are treated as UPL for this analysis.	Remarks:								
	species with no indicator (NI) are treated as	upl for this and	aiysis.						

SOIL Sampling Point: S-87

Profile Descri	ption: (Describe to	•						
Depth	(in all a a)			Redox Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	10 YR 3/3	100					Sandy Clay	
8-18	10 YR 3/3	100					Sandy Clay	40% gravels
_	_		_					
¹ Type: C=Con	centration, D=Deple	etion, RM=	Reduced Matrix,	CS=Cove	red or Coa	ted Sand Grains.	² Location: PL=	Pore Lining, M=Matrix
Hydric Soil Inc	dicators						Indicate	ors for Problematic Hydric Soils ³ :
Histosol (A1)				Sandy Gleyed Matrix (S4)			1 cm Muck (A9) (LRR I, J)	
Histic Epipedon (A2)			_		, , Redox (S		Coast Prairie Redox (A16) (LRR F, G, H)	
	Histic (A3)		_	Stripped Matrix (S6) Loamy Mucky Mineral (F1) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7)			Dark Surface (S7) (LRR G) High Plains Depressions (F16) (LRR H outside of MLRA 72 & 73) Reduced Vertic (F18) Red Parent Material (TF2) Other (Explain in Remarks)	
_	en Sulfide (A4)		_					
	ed Layers (A5) (LRF	RF)	_					
	luck (A9) (LRR F, G	-	_					
	ed Below Dark Surfa		_					
	Dark Surface (A12)	,	_					
	Mucky Mineral (S1))	_		x Depression			,
· · · · · · · · · · · · · · · · ·			- R G. H)	High Plains Depressions (F16)			³ Indicators of hydrophylic vegetation and wetland hydrology must be present, unless	
2.5 cm	2.5 cm Mucky Peat or Peat (S2) (LRR G, H) 5 cm Mucky Peat or Peat (S3) (LRR F)			(MLRA 72 & 73 of LRR H)			disturbed or problematic.	
	-	(S3) (LRR I	=)	(ML	RA 72 & 73	of LRR H)	disturb	ed of problematic.
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Appendix B: Representative Photographs



Photo #1A-1: View to the north of **PEM-1A,** an NWI-mapped depressional palustrine emergent wetland. NHD-mapped Clear Creek here, but no channel features are present.



Photo #1A-2: View to the south of **Sample Point 1A.** Photo shows wetland sample point for NWI-mapped depressional palustrine emergent wetland **PEM-1A.** NHD-mapped Clear Creek here, but no channel features are present.



Photo #1A-3: View to the northwest of **PEM-1A**, an NWI-mapped depressional palustrine emergent wetland. NHD-mapped Clear Creek here, but no channel features are present.



Photo #1A-4: View to the southwest of **PEM-1A,** an NWI-mapped depressional palustrine emergent wetland. NHD-mapped Clear Creek here, but no channel features are present.



Photo #2A: View to the southeast of **Sample Point 2A.** Photo shows paired upland point for PEM-1A.



Photo #1B: View to the north of **Sample Point 1B.** Photo shows additional wetland sample point for NWI-mapped palustrine emergent wetland **PEM-1A.**



Photo #2B: View to the southwest of **Sample Point 2B.** Photo shows paired upland point for Sample Point 1B, PEM-1A.



Photo #1C-1: View to the southwest of **Sample Point 1C.** Photo shows wetland sample point for NWI-mapped palustrine emergent wetland **PEM-1B**.



Photo #1C-2: View to the southwest of **PEM-1B**, a palustrine emergent wetland including areas mapped by NWI.



Photo #2C: View to the southwest of **Sample Point 2C.** Photo shows the paired upland point for Sample Point 1C, PEM-1B.

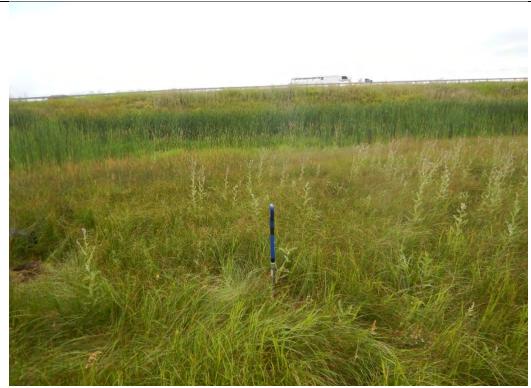


Photo #1D-1: View to the north of **Sample Point 1D.** Photo shows additional wetland sample point for **PEM-1B**, an NWI-mapped depressional palustrine emergent wetland. Area includes NHD-mapped Clear Creek, but no channel features present.



Photo #1D-2: View to the west of **PEM-1B**, an NWI-mapped depressional palustrine emergent wetland. NHD-mapped Clear Creek here, but no channel features are present.



Photo #2D: View to the southeast of **Sample Point 2D.** Photo shows paired upland point for Sample Point 1D.



Photo #1E-1: View to the east of **Sample Point 1E. Photo shows PEM-1C**, an NWI-mapped depressional palustrine emergent wetland.



Photo #1E-2: View to the west of **PEM-1C**, an NWI-mapped depressional palustrine emergent wetland. NHD-mapped Clear Creek here, but no channel features are present.



Photo #1F: View to the north of **PEM-1D**, an NWI-mapped depressional palustrine emergent wetland. NHD-mapped Clear Creek here, but no channel features are present.



Photo #3: View to the southwest of **Sample Point 3.** Photo shows depressional area with dominant hydrophytic vegetation and wetland hydrology but lacking hydric soils.



Photo #4: View to the northwest of **Sample Point 4.** Photo shows area of open water **OW-1** surrounded by PEM-1A.



Photo #5A: View to the south of **Sample Point 5A**. Photo shows wetland sample point for palustrine emergent wetland **PEM-2A**.



Photo #5B: View to the north of palustrine emergent wetland PEM-2B.



Photo #5C: View to the west of **Sample Point 5B.** Photo shows additional wetland point for palustrine emergent wetland **PEM-2C**, which includes an NWI-mapped PEM wetland.



Photo #5D: View to the northwest of palustrine emergent wetland PEM-2D.



Photo #6: View to the southwest of **Sample Point 6.** Photo shows paired upland point for PEM-2.



Photo #7: View to the southwest of **Sample Point 7.** Photo shows vegetated swale appearing dark on aerial imagery but lacking wetland indicators.



Photo #8: View to the southeast of **Sample Point 8.** Photo shows palustrine emergent wetland **PEM-3**.



Photo #9: View to the southwest of **Sample Point 9.** Photo shows paired upland point for PEM-3.



Photo #10: View to the northeast of **Sample Point 10.** Photo shows depressional area with dominant hydrophytic vegetation and wetland hydrology but lacking hydric soils.



Photo #11: View to the southwest of **Sample Point 11.** Photo shows area mapped by NWI as an palustrine emergent wetland but lacking wetland indicators.



Photo #12: View to the southeast of **Sample Point 12.** Photo shows palustrine emergent wetland **PEM-4**.



Photo #13: View to the northeast of **Sample Point 13.** Photo shows paired upland point for PEM-4.



Photo #14: View to the west of **Sample Point 14.** Photo shows depressional area with dominant hydrophytic vegetation and wetland hydrology but lacking wetland indicators.



Photo #15: View to the north of **Sample Point 15.** Photo shows palustrine emergent wetland **PEM-5**, including an area mapped by NWI as PEM.



Photo #16: View to the north of **Sample Point 16.** Photo shows paired upland point for PEM-5.



Photo #17: View to the northeast of **Sample Point 17.** Photo shows depressional area with dominant hydrophytic vegetation and wetland hydrology but lacking hydric soils.



Photo #18A: View to the east of **Sample Point 18.** Photo shows palustrine emergent wetland **PEM-6A** at a culvert mouth.



Photo #18B: View to the southwest of palustrine emergent wetland **PEM-6B** connected via a culvert to PEM-6A.



Photo #19: View to the southeast of **Sample Point 19.** Photo shows paired upland point for PEM-6.



Photo #20: View to the southwest of **Sample Point 20.** Photo shows NWI-mapped palustrine emergent wetland **PEM-7**.



Photo #21: View to the southwest of **Sample Point 21.** Photo shows paired upland point for PEM-7.



Photo #22: View to the north of **Sample Point 22.** Photo shows depressional area with dominant hydrophytic vegetation and wetland hydrology but lacking hydric soils.

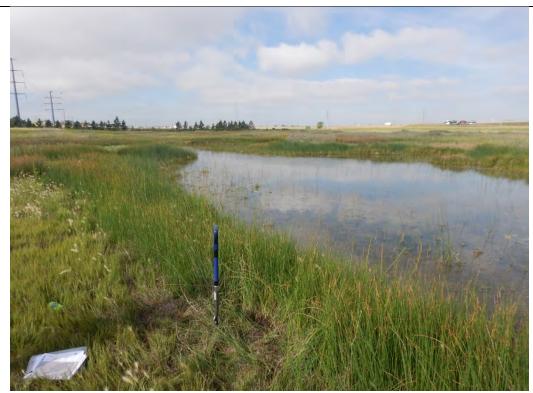


Photo #23A: View to the southwest of **Sample Point 23.** Photo shows NWI-mapped depressional/fringe palustrine emergent wetland **PEM-8A** around OW-2.



Photo #23B: View to the northeast of depressional palustrine emergent wetland PEM-8A.



Photo #23C: View to the northeast of depressional palustrine emergent wetland PEM-8C.



Photo #24: View to the south of **Sample Point 24.** Photo shows paired upland point for PEM-8.



Photo #25: View to the south of **Sample Point 25.** Photo shows open water feature **OW-2** surrounded by fringe/depressional PEM-8A.



Photo #26: View to the west of **Sample Point 26.** Photo shows palustrine scrub-shrub wetland **PSS-1** abutting PEM-1B in area mapped by NWI as PEM.



Photo #27: View to the east of **Sample Point 27.** Photo shows paired upland point for PSS-1.



Photo #28: View to the northeast of **Sample Point 28.** Photo shows NWI-mapped depressional/fringe palustrine emergent wetland **PEM-9** around OW-3.



Photo #29: View to the northwest of **Sample Point 29.** Photo shows paired upland point for PEM-9.



Photo #30: View to the southwest of **Sample Point 30.** Photo shows NHD-mapped stock pond **OW-3.** Area is also mapped by NWI as PEM.



Photo #31: View to the south of **Sample Point 31.** Photo shows palustrine scrub-shrub wetland **PSS-2** abutting PEM-9 and OW-3.



Photo #32: View to the west of Sample Point 32. Photo shows paired upland point for PSS-



Photo #33: View to the east of **Sample Point 33.** Photo shows NWI-mapped depressional palustrine emergent wetland **PEM-10**.



Photo #34: View to the west of **Sample Point 34.** Photo shows paired upland point for PEM-10.



Photo #35: View to the north of **Sample Point 35.** Photo shows NWI-mapped palustrine emergent wetland **PEM-11.** No right-of-entry for site; hydric soils assumed in presence of dominant hydrophytic vegetation and wetland hydrology.



Photo #36: View to the northeast of **Sample Point 36.** Photo shows depressional area with dominant hydrophytic vegetation and wetland hydrology but lacking hydric soils.



Photo #37: View to the east of **Sample Point 37.** Photo shows depressional palustrine emergent wetland **PEM-12.**



Photo #38: View to the west of **Sample Point 38.** Phot shows paired upland point for PEM-12.



Photo #39: View to the southeast of **Sample Point 39.** Photo shows depressional area with dominant hydrophytic vegetation and wetland hydrology but lacking hydric soils.



Photo #40: View to the eats of **Sample Point 40.** Photo shows depressional area with dominant hydrophytic vegetation and wetland hydrology but lacking hydric soils.



Photo #41: View to the northeast of **Sample Point 41.** Photo shows depressional palustrine emergent wetland **PEM-13.**



Photo #42: View to the north of **Sample Point 42.** Photo shows paired upland point for PEM-13.



Photo #43: View to the southwest of **Sample Point 43.** Photo shows depressional area with dominant hydrophytic vegetation and wetland hydrology but lacking hydric soils.



Photo #44: View to the southwest of **Sample Point 44.** Photo shows depressional area with dominant hydrophytic vegetation and wetland hydrology but lacking hydric soils.



Photo #45: View to the northwest of **Sample Point 45.** Photo shows depressional palustrine emergent wetland **PEM-14.**



Photo #46: View to the south of **Sample Point 46.** Photo shows paired upland point for PEM-14.



Photo #47A: View to the south of **Sample Point 47A.** Photo shows wetland sample point for palustrine emergent wetland **PEM-15A.**



Photo #47B: View to the southwest of **Sample Point 47B.** Photo shows palustrine emergent wetland **PEM-15C,** connected to PEM-23A via culverts.



Photo #48: View to the south of **Sample Point 48.** Photo shows paired upland point for PEM-15A.



Photo #49: View to the east of **Sample Point 49.** Photo shows depressional/fringe palustrine emergent wetland **PEM-16** under I-25 bridges.



Photo #50: View to the southwest of **Sample Point 50.** Photo shows paired upland point for PEM-16.



Photo #51: View to the southeast of **Sample Point 51.** Photo shows area mapped by NWI as palustrine emergent wetland but lacking wetland indicators.



Photo #52: View to the southeast of **Sample Point 52.** Photo shows depressional palustrine emergent wetland **PEM-17** at culvert mouth.



Photo #53: View to the southeast of **Sample Point 53.** Photo shows paired upland point for PEM-17.



Photo #54A: View to the southeast of **Sample Point 54.** Photo shows NHD-mapped perennial stream **PS-1**, Crow Creek, flowing west to east under I-25.



Photo #54B: View to the east of NHD-mapped natural watercourse **PS-1**, Crow Creek, flowing west to east under I-25.



Photo #55: View to the northwest of **Sample Point 55.** Photo shows fringe along PS-1 with dominant hydrophytic vegetation and wetland hydrology but lacking hydric soils.



Photo #56/Photo #57: View to the southwest of **Sample Points 56 and 57.** Google Earth photo shows depressional/fringe palutstrine emergent wetland **PEM-18** and stock pond **OW-4.** Photo not taken during field survey due to staff oversight.



Photo #58: View to the south of **Sample Point 58.** Photo shows area mapped by NWI as a palustrine emergent wetland and by NHD as a waterbody, but lacking indicators of both.



Photo #59: View to the northwest of **Photo Point 59.** Photo shows depressional palustrine emergent wetland **PEM-19.**



Photo #60: View to the northwest of **Sample Point 60.** Photo shows paired upland point for PEM-19.



Photo #61: View to the east of **Sample Point 61.** Photo shows depressional palustrine emergent wetland **PEM-20.**



Photo #62: View to the west of **Sample Point 62.** Photo shows paired upland point for PEM-20.



Photo #63: View to the south of **Sample Point 63.** Photo shows area with dominant hydrophytic vegetation but lacking hydric soils and wetland hydrology.



Photo #64: View to the northeast of **Sample Point 64.** Photo shows depressional palustrine emergent wetland **PEM-21.**



Photo #65: View to the south of **Sample Point 65.** Photo shows paired upland point for PEM-21.



Photo #66: View to the south of **Sample Point 66.** Photo shows area with dominant hydrophytic vegetation but lacking wetland hydrology and hydric soils.



Photo #67: View to the south of **Sample Point 67.** Photo shows NWI-mapped depressional palustrine emergent wetland **PEM-22.**



Photo #68: View to the west of **Sample Point 68.** Photo shows paired upland point for PEM-22.



Photo #69: View to the east of **Sample Point 69.** Photo shows depressional area with dominant hydrophytic vegetation and wetland hydrology but lacking hydric soils.



Photo #70: View to the north of **Sample Point 70.** Photo shows depressional palustrine emergent wetland **PEM-23.**



Photo #71: View to the south of **Sample Point 71.** Photo shows paired upland point for PEM-23.



Photo #72: View to the northwest of **Sample Point 72.** Photo shows depressional palustrine emergent wetland **PEM-24**.



Photo #73: View to the south of **Sample Point 73.** Photo shows paired upland point for PEM-24.



Photo #74: View to the northwest of **Sample Point 74.** Photo shows depressional palustrine scrub-shrub wetland **PSS-3**.



Photo #75: View to the northeast of **Sample Point 75.** Photo shows paired upland point for PSS-3.



Photo #76 View to the east of **Sample Point 76.** Photo shows depressional palustrine emergent wetland **PEM-25.**



Photo #77: View to the west of **Sample Point 77.** Photo shows paired upland point for PEM-25.



Photo #78: View to the east of **Sample Point 78.** Photo shows depressional palustrine emergent wetland **PEM-26**.



Photo #79: View to the east of **Sample Point 79.** Photo shows paired upland point for PEM-26.



Photo #80: View to the east of **Sample Point 80.** Photo shows depressional area with dominant hydrophytic vegetation and wetland hydrology but lacking hydric soils.



Photo #81A: View to the southwest of **PEM-27A.** Photo shows NWI-mapped depressional palustrine emergent wetland. Area mapped by NHD as a channel, but no features present.



Photo #81B: View to the northeast of **PEM-27B.** Photo shows NWI-mapped depressional palustrine emergent wetland. Area mapped by NHD as a channel, but no features present.



Photo #81C: View to the east of **Sample Point 81** and **PEM-27C.** Photo shows sample point for NWI-mapped depressional palustrine emergent wetland **PEM-27.** Area mapped by NHD as a channel, but no features are present.



Photo #81D: View to the east of **PEM-27D.** Photo shows NWI-mapped depressional palustrine emergent wetlan. Area mapped by NHD as a channel, but no features present.



Photo #81E: View to the southwest of **PEM-27E.** Photo shows NWI-mapped depressional palustrine emergent wetland. Area mapped by NHD as a channel, but no features present.



Photo #81F: View to the east of **PEM-27F.** Photo shows NWI-mapped depressional palustrine emergent wetland. Area mapped by NHD as a channel, but no features present.



Photo #82: View to the east of **Sample Point 82.** Photo shows paired upland point for PEM-27.



Photo #83A: View to the west of **Sample Point 83.** Photo shows depressional palustrine scrub-shrub **PSS-4** within PEM-27C.



Photo #83B: View to the northeast of depressional palustrine scrub-shrub wetland **PSS-4** within PEM-27C.



Photo #84: View to the west of **Sample Point 84.** Photo shows paired upland point for PSS-4.



Photo #85A: View to the northwest of **Sample Point 85.** Photo shows depressional palustrine emergent wetland **PEM-28A**.



Photo #85B: View to the southwest of **PEM-28B.** Photo shows depressional palustrine emergent wetland connected via culvert to PEM-28A.



Photo #86: View to the west of **Sample Point 86.** Photo shows paired upland point for PEM-28.



Photo #87: View to the southeast of **Sample Point 87.** Photo shows area mapped by NWI as PEM and by NHD as a channel. Area has dominant hydrophytic vegetation and wetland hydrology but lacks hydric soils. No channel features present.