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Gretna Bottom 2 Wetland Mitigation Bank

Site Development Plan

Sarpy County, Nebraska May 1, 2023

USACE No. 2017-00703 Plant 40 USACE No. 2016-00221 Plant 52

Gretna Bottom 2 Wetland Mitigation Bank Lyman-Richey Corporation / U.S. Army Corps of Engineers Signature Page

This Agreement, entered into by the Lyman-Richey Corporation (Bank Sponsor or LRC) and the U.S. Army Corps of Engineers (USACE), is for the purpose of establishing the Gretna Bottom 2 Wetland Mitigation Bank (Bank). The Bank will be used to mitigate unavoidable wetland impacts, as approved by USACE, who is responsible for administering Section 404 of the Clean Water Act. The creation, operation, and use of the Bank will be in accordance with the Lyman-Richey Umbrella Wetland and Stream Mitigation Banking Agreement.

The Interagency Review Team (IRT) that provided technical support to USACE included the following agencies: EPA, NRCS, USFWS, NDEE, and NGPC. These agencies sign in support of the creation of this Bank (under separate cover).

The goal of the Bank is to create palustrine, riverine floodplain wetlands to compensate for losses of wetland functions, while improving the aquatic resource environment. Water regime modifiers for mitigation wetlands are temporarily flooded and seasonally flooded.

The objectives of the Bank are to develop approximately 46.20 acres of mitigation wetlands for allocation toward future LRC projects. In addition, the Bank will establish 6.40 acres of native grassed buffer around the mitigation wetlands to enhance and preserve aquatic functions of the Bank.

The primary geographical service area for the Bank is the Lower Platte watershed (HUC 8 ID: 10200202), a small portion of the Salt HUC 8 watershed (HUC 8 ID: 10200203), and a portion of the Lower Platte-Shell HUC 8 watershed (HUC 8 ID: 10200201) that are located within the Lower Platte Alluvial Plain Ecoregion. At the discretion of USACE, credits may be approved outside of the primary geographic service area.

USACE approval of the Bank constitutes the regulatory approval required for the Bank to be used to provide compensatory mitigation for Department of the Army permits pursuant to 33 CFR 332.8(a)(1). The Bank is not a contract between the Bank Sponsor or Property Owners and USACE, or any other agency of state or federal government which may be signatory hereto. Any dispute arising under this Agreement will not give rise to any claim by the Bank Sponsor or Property Owners for monetary damages. This provision is controlling notwithstanding any other provision or statement in the Agreement to the contrary.

Insert Name and Position Lyman-Richey Corporation, Bank Sponsor Date Signed

Insert Name and Position U.S. Army Corps of Engineers, Omaha District Date Signed

Gretna Bottom 2 Wetland Mitigation Bank Interagency Review Team Signature Page

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BY:	U.S. Environmental Protection Agency, Region 7	Date Signed:	
	State Conservationist Natural Resources Conservation Service		
BY:	U.S. Fish and Wildlife Service	Date Signed:	
BY:	Nebraska Department of Environment and Energy	Date Signed:	
BY:	Nebraska Game and Parks Commission	Date Signed:	

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1 Project Overview

Lyman-Richey Corporation (LRC) proposes to construct and operate the Gretna Bottom 2 Wetland Mitigation Bank (Bank), in accordance with its Umbrella Wetland and Stream Mitigation Banking Agreement (Umbrella Agreement). Planned construction is intended to facilitate mitigation wetland development only – no portion of the Bank would be mined.

The purpose of this Site Development Plan is to detail establishment, use, operation, and maintenance of the Bank. The contents provided herein are consistent with those outlined in 33 CFR 332.4(c).

1.1 Gretna Bottom 2 Mitigation Bank

The 52.60-acre Bank is located just east of the Platte River in Sarpy County, Nebraska (see Appendix A, Figure A1). More specifically, the Bank is located north of the intersection of Fairview Road and South 252nd Street in Section 09, Township 13 North, Range 10 East. The Bank consists of fallow agricultural field/unmaintained land in proximity to the active mining operations at LRC's Plant 52. The Bank was delineated as part of LRC's Plant 52 Project in 2017 (USACE File No. 2016-00221). No wetlands or waterways were identified within the Bank.

The Bank is located in the Lower Platte watershed (HUC 8 ID: 10200202) and the Lower Platte Alluvial Plain Level IV Ecoregion. The Geographic Service Area (GSA) for the Bank would include the Lower Platte HUC 8 watershed, a small portion of the Salt HUC 8 watershed (HUC 8 ID: 10200203) on the eastern side, and the lower portion of the Lower Platte-Shell HUC 8 watershed (HUC 8 ID: 10200201) that are located within the Lower Platte Alluvial Plain Ecoregion (see Appendix A, Figure A2).

1.2 Plant 40 and Plant 52 Project-Specific Mitigation

Plant 40 (2017-00703) and Plant 52 (2016-00221) are existing LRC sand and gravel mining operations. The Plant 52 site is located immediately east of the Bank (see Appendix A, Figure A3). Plant 40 is located in Waterloo, Nebraska, in Sections 19 and 24, Township 15 North, Range 10 East (41.2511376, -96.3413903). Plant 40 and Plant 52 are separate, stand alone, permitted actions with proposed permittee-responsible mitigation within the footprint of the Bank. The majority of the mitigation requirements of Plant 40 and Plant 52 were satisfied via LRC's Gretna Bottom 1 Mitigation Bank and by credit purchase from the Bundy Wetland Mitigation Bank. Additionally, 20.04 acres at the Gretna Bottom 2 Mitigation Bank property would provide necessary mitigation for 2023/2024 Plant 40 and Plant 52 mining impacts. The property is of adequate size and location to fulfill these project-specific mitigation requirements, while also developing wetland bank credits with the surplus acreage.

2 Objectives

Bank objectives are as follows:

- Create 5.12 acres of emergent wetland and 0.40 acre of scrub-shrub wetland to fulfill the balance of wetland mitigation requirements of Plant 40.
- Create 14.52 acres of emergent wetland to fulfill the balance of wetland mitigation requirements of Plant 52.
- Create and bank 27.76 wetland mitigation bank credits for future LRC projects.
- Establish 6.40 acres of native grassed buffer around the mitigation wetlands.
- Realize the following ecological functions/values in the Platte River floodplain: wildlife habitat, groundwater recharge, flood storage, and water quality.

3 Site Selection

Multiple factors were considered for site selection:

- Landscape Position The Bank lies just downstream of the Elkhorn River confluence with the Platte River and within the Platte River floodplain. Prior to agricultural conversion, wetlands and wet meadows were prevalent within the Platte and Elkhorn River floodplains. Many of these wetlands have been lost as a result of agricultural practices.
- 2. Technical Suitability Considerations necessary to facilitate successful and sustainable wetland development include the following:
 - a. Hydrology The Bank's location within the Platte River floodplain, and the associated availability of groundwater, would provide the necessary hydrology (14 or more consecutive days during the growing season) to achieve the Bank's objectives. No additional water rights would be needed to maintain the requisite hydrology.
 - b. Feasibility With minor grading, the Bank can utilize available groundwater hydrology to develop wetland conditions. No water control structures would need to be constructed or seasonally manipulated to achieve the desired objectives. A select range of grading contours, in combination with seasonally fluctuating groundwater levels, would allow specific water regimes and associated wetland vegetation.
 - c. Reference Sites The presence of existing wetlands near the Bank indicates the potential for wetland development on the Bank. Gretna Bottom 1 Mitigation Bank is located immediately southeast of the Bank. Gretna Bottom 1 utilized similar design criteria as the Bank and has certified wetland credits after its third year of monitoring. Additional mitigation banks with certified credits are located 1.5 to 2.5 miles south of the Bank, within the same Platte River floodplain. These banks support similar vegetation and hydrologic conditions (emergent to semi-permanently flooded wetlands), creating riverine floodplain wetland complexes.

- d. Compatibility The Bank is surrounded by agriculture and Plant 52. Its placement in the Platte River floodplain is compatible with existing land uses, as well as the future reclamation of Plant 52 to wetland and open water areas.
- e. Upland Buffer The size of the Bank allows for a minimum 50-foot upland buffer (the buffer exceeds 50 feet in many areas). LRC would clearly delineate the Bank's boundary and employ best management practices to prevent inadvertent impact from adjacent mining activities, which are proceeding east and north in future years: away from the Bank.
- LRC Planning LRC anticipates future mining activities, and associated unavoidable impacts to waters of the U.S., within the GSA over the next 20 years.

4 Protection Instrument

LRC would initially own the Bank and establish a conservation easement or implement other protective real estate mechanisms. The real estate mechanism would be filed with the Sarpy County Registrar of Deeds. LRC would provide a certified copy of the document to USACE within 60 days of the completion of construction.¹ Regardless of potential, future LRC relinquishment of ownership, these restrictive preservation mechanisms would protect the mitigation wetlands in perpetuity.

5 Baseline Information

The Bank is located in the FEMA designated floodway of the Platte River, just downstream of the Elkhorn River confluence. The Bank would be in close proximity to the first Gretna Bottom Wetland Mitigation Site, as well as several open water pits associated with past mining activities. The Bank has historically been (and is currently) maintained for agricultural practices. Ten historic aerial photographs, ranging from 1953 to 2020, are provided as Appendix B. Surrounding land use is also agricultural.

5.1 Aquatic Resources

A wetland delineation report for Plant 52, developed in accordance with the *Army Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and *Midwest Regional Supplement* (USACE 2010), was submitted to USACE as part of the Plant 52 Section 404 Permit Application (see Appendix C). No wetlands or waterways were delineated within the Bank. The Bank would be situated within Plant 52's original Phase 1 footprint. Due to unexpected changes in geologic conditions identified within the original Phase 1 area, mining has ceased with no further expansion of mining operations in the area.

¹ LRC understands that no mitigation credit would be released until the site protection files are verified (in addition to the Site Plan being approved and the financial assurances being confirmed).

5.2 Hydrology

A Groundwater Analysis Technical Memorandum was developed by HDR in 2021 (see Appendix D). The analysis found groundwater elevations within the Bank ranging from 1,066.1 to 1,070.4 feet, with the lowest groundwater elevations occurring in the southern part of the Bank. The depth to water table across the Bank ranges from 0 to 6.6 feet, with the mean depth to water table equating 2.7 feet below ground surface. Groundwater elevations and depth to groundwater surfaces were interpolated and mapped from surrounding well data in order to inform Bank design.

5.3 Water Quality

Approximately 0.14 mile west of the Bank, the Platte River (LP1-10000) is listed as a Category 5 impaired waterway in the 2020 Nebraska Water Quality Integrated Report. The Platte River is impaired for aquatic life – fish consumption, for recreation due to *E. coli*, and public drinking water due to Arsenic (NDEE 2021). An *E. coli* Total Maximum Daily Load (TMDL) was approved in 2007.

5.4 Vegetation

Because the Bank has been regularly cultivated and has experienced routine disturbance from adjacent mining, the area is dominated by non-wetland, ruderal species, including: field pennycress (*Thlaspi arvense*), pigweed (*Amaranthus spp.*), horseweed (*Conyza canadensis*), common ragweed (*Ambrosia artemisiifolia*), great ragweed (*Ambrosia trifida*), red cedar (*Juniperus virginiana*), mullein foxglove (*Dasistoma macrophylla*), buffalograss (*Bouteloua dactyloides*), field bindweed (*Convolvulus arvensis*), honey locust (*Gleditsia triacanthos*), annual sunflower (*Helianthus annuus*), common crabgrass (*Digitaria sanguinalis*), Virginia plantain (*Plantago virginica*), and smooth brome (*Bromus inermis*).

5.5 Soils

According to the U.S. Department of Agriculture (USDA)/NRCS Soils Survey Geographic (SSURGO) database for Sarpy County, Nebraska, there are three mapped soil series within the Bank (see Appendix A, Figure A4):

- Inglewood-Novina complex, occasionally flooded (Non-Hydric)
- Gibbon loamy sand, overwash, 0-2 percent slopes, occasionally flooded (Non-Hydric)
- Gibbon-Wann complex, occasionally flooded (Non-Hydric)

The Inglewood series consists of very deep moderately well drained soils formed in sandy alluvium on floodplains. Slopes typically range 0 to 3 percent.

The Novina series consists of very deep moderately well drained soils. They formed in loamy and sandy alluvium on floodplains and stream terraces. Slopes range from 0 to 2 percent.

The Gibbon series consists of very deep, somewhat poorly drained soils that formed in stratified, calcareous alluvium. These soils are on floodplains in river valleys of Central Loess Plains, MLRA 75. Slopes range from 0 to 2 percent.

The Wann series includes very deep, somewhat poorly drained soils formed in stratified calcareous alluvium. These soils are on floodplains in river valleys in Central Loess Plains, MLRA 75. Slope ranges 0 to 2 percent.

5.6 Wildlife

Existing wildlife species are those typically found on agricultural land in the area: whitetailed deer, rabbits, mice, eastern wild turkeys, pheasants, and crows.

6 Determination of Credits

6.1 Project-Specific Mitigation

2023/2024 Plant 40 and Plant 52 impacts require 20.04 acres of project-specific wetland mitigation, as detailed in Table 1. Impacts would be offset in the southern portion of the Bank via project-specific mitigation (see Appendix A, Figure A5).

Year	Wetland Impacts		Wetland Mitigation					
	Wetland Type ¹	Nebraska Subclass	Acres	Wetland Type ¹	Nebraska Subclass	Ratio	Acres	
	Plant 40 (2017-00703)							
2023	PEMA/C	Riverine Channel	0.01	PEMA/C	Riverine Floodplain	4:1	0.04	
	PEMA/C	Riverine Floodplain	0.01	PEMA/C	Riverine Floodplain	2:1	0.02	
	PEMF	Riverine Channel	0.09	PEMA/C	Riverine Floodplain	8:1	0.72	
	PSSA	Riverine Channel	0.10	PSSA	Riverine Floodplain	4:1	0.40	
	WIAS	Riverine Floodplain	1.47	PEMA/C	Riverine Floodplain	2:1	2.94	
2024	PEMA/C	Riverine Floodplain	0.70	PEMA/C	Riverine Floodplain	2.1	1.40	
TOTAL			2.38			TOTAL	5.52	
Plant 52 (2016-00221)								
2023	WIAS	Riverine Floodplain	4.43	PEMA/C	Riverine Floodplain	2:1	8.86	
2024	WIAS	Riverine Floodplain	2.83	PEMA/C	Riverine Floodplain	2:1	5.66	
TOTAL			7.26			TOTAL	14.52	
GRAND TOTAL			9.64		GRAND	TOTAL	20.04	

Table 1. Plant 40 and Plant 52 Project-Specific Mitigation Matrix

Note: ¹ WIAS = Wetland in an agricultural setting; PEMA/C = Palustrine Emergent Temporarily/Seasonally Flooded Wetland; PSSA = Palustrine Scrub-Shrub Temporarily Flooded Wetland.

6.2 Wetland Credit Production

At which time that USACE determines that all Plant 40- and Plant 52-specific mitigation obligations have been met, wetland mitigation bank credits would be requested for surplus wetland acreage that has shown consistent establishment on the Bank. Credits would be certified when USACE has verified that the Bank meets performance standards (see Section 9). Table 2 considers Plant 40- and Plant 52-specific mitigation and details the amount of surplus wetland area that may be certified as bank credit.

Туре	Anticipated Acres	Plant 40 Debit (Acres)	Plant 52 Debit (Acres)	Net Bank Credits
PEMA/C	39.10	-5.12	-14.52	19.46 ¹
PSSA	5.20	-0.40	N/A	4.80 ¹
PFOA	1.90	N/A	N/A	1.90 ¹
Buffer	6.40	N/A	N/A	1.60 ²
TOTAL	52.60	-5.52	-14.52	27.76

Table 2. Wetland Credit Potential

Notes:

¹ Credits for wetland creation are produced at a ratio of 1:1 (LRC 2019).

² Credits for buffer are produced at a ratio of 4:1 (LRC 2019).

6.3 Wetland Credit Availability

A general schedule of credit availability, including allowable pre-crediting, is provided in Table 3. Pre-crediting is only applicable to the surplus area of the Bank that is not associated with Plant 40- and Plant 52-specific mitigation (see Table 2). Pre-crediting may be applied to 30 percent of the planned, surplus mitigation wetlands that satisfy wetland criteria (as defined in the USACE 1987 Wetland Delineation Manual and 2010 Regional Supplement), but are pending IRT certification. Partial bank certification is allowable, at the discretion of the IRT.

Table 3. Schedule of Wetland Credit Availability

Bank Status	Available Credits Released ¹	Cumulative Credits Released ¹
Site Development Plan Approval (pre-crediting)	1.39 (5%)	1.39 (5%)
Construction Complete (pre-crediting)	2.78 (10%)	4.16 (15%)
Satisfies Wetland Criteria ² (pre-crediting)	4.16 (15%)	8.33 (30%)
Certified	27.76 (100%)	27.76 (100%)

Notes:

¹ Based on total anticipated credits.

² Wetland criteria are defined in the Corps of Engineers Wetland Delineation Manual (USACE 1987) and Midwest Regional Supplement (USACE 2010).

7 Mitigation Work Plan

The Plant 40- and Plant 52-specific emergent and scrub-shrub wetland impacts would be mitigated at a variety of ratios ranging from 2:1 to 8:1 (see Table 1). The resulting project-specific mitigation need is 20.04 acres of emergent and scrub-shrub wetlands to be located in the southern portion of the Bank. The remainder of the Bank would be optimized for wetland credit establishment. The entirety of the Bank would be buffered with native grasses and forbs. No stream mitigation is proposed at the Bank. The design drawing is provided as Appendix E.

7.1 Grading Plan

The Grading Plan is intended to facilitate groundwater interaction and mitigation wetland development (see Appendix E). Groundwater elevations range from 1,071 feet on the north to 1,066 feet on the south (see Appendix D). Proposed PEMA/C wetland elevations are 1 to 2 feet higher than the water table, across the Bank. Proposed PFOA and PSSA wetland elevations are 1 to 2 feet higher than the proposed PEMA/C elevations. The proposed contours are designed to provide connected depressions that mimic the natural, north to south Platte River drainage pattern.

Grading would be performed by a professional grading contractor. During construction, the contractor would use sediment and erosion control best management practices, as appropriate.

7.2 Hydrology

Groundwater would be the primary hydrology source for the Bank. The Grading Plan was informed by groundwater analysis and should result in post-construction groundwater interaction that provides inundation and/or soil saturation for extended periods during the growing season. Local stormwater runoff would equate a minor, secondary source. Additional hydrologic considerations are as follows:

- There are multiple groundwater monitoring wells in close proximity to the Bank that could continue to be used to evaluate groundwater levels.
- Plans do not include any type of water control structure.
- No additional water rights would be required.

7.3 Vegetation

The "OBL Wetland" seed mixture would be applied in the 39.1 acres planned for emergent wetland development. The "FACW Wetland" seed mixture would be applied in the 7.1 acres planned for forested and scrub-shrub wetland development. Appendix F details both seed mixtures.

7.4 Soils

On-site soils would be used for vegetation establishment. Topsoil would be stockpiled and preserved during grading, and re-spread in planned wetland and buffer areas. Erosion control measures would be used during grading.

7.5 Habitat

The Bank, and associated wetland and upland vegetation, would provide wildlife habitat, and would supplement the valuable and broad-reaching habitat of the adjacent Platte River. More specifically, it is anticipated that the Bank would receive increased use by waterfowl, beaver, muskrat, and various species of amphibians and reptiles.

7.6 Buffer

A minimum 50-foot-wide buffer would be developed around the Bank perimeter. An upland meadow seed mixture composed of grasses and forbs would be applied to the 6.4 acres of planned buffer (see Appendix F).

7.7 Construction Schedule

Bank construction is contingent upon Site Development Plan approval and the issuance of a Section 404 permit amendment for Plant 40 and Plant 52. The Bank would be constructed concurrent with, or in advance of, the 2023-2024 Plant 40 and Plant 52 project impacts.

8 Maintenance and Invasive Species Control

LRC is financially responsible for the Bank and associated maintenance activities, which may include: mowing of native grasses to establish buffer, post-construction erosion control, and general maintenance of wetland areas. Additionally, the Bank would be inspected regularly for the presence of invasive/noxious weeds. If identified, such species would be mowed or sprayed, at the recommendation of a qualified biologist and following approval by USACE.

9 Performance Standards

Bank development is expected to satisfy the below-listed, annual performance standards. When evaluating these standards, wetland hydrology indicators are those defined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (USACE 2010). Hydric soil indicators are intentionally absent from the annual performance standards because they may take more than 10 years to develop. Success of the upland buffer would be determined by the establishment of at least 75 percent perennial cover.

9.1 Emergent Wetland Mitigation

• <u>Year 1</u> – Annual and perennial grasses and forbs recruited from the soil, the native wetland seed mixture, and from propagules received from adjoining wetlands will begin to become established. These new plants will be interspersed, and bare ground may be apparent. Weedy annual species may be present and abundant. Absolute ground cover is at least 25 percent by the end of the first growing season. At least one primary hydrology indicator is present, distinct, and appropriate for the targeted water regime(s). Volunteer native tree species are establishing (but are not expected to be dominant within the community).

- <u>Year 2</u> The plant distribution shall meet the 1987 Manual Dominance Test more than 50 percent of the dominant species are FAC or wetter. Absolute ground cover, species abundance, and species diversity are greater than Year 1. Undesirable species (noxious weeds, *Typha, Phragmites, Phalaris*, etc.) are neither dominant nor trending toward dominance. Weedy annuals may still be present or even dominant, but should be decreasing. Absolute ground cover is at least 50 percent. At least one primary hydrology indicator is present, distinct, and appropriate for the targeted water regime(s). Volunteer native tree species are establishing (but are not expected to be dominant within the community).
- Year 3 The plant distribution shall meet the 1987 Manual Dominance Test more than 50 percent of the dominant species are FAC or wetter. Additionally, at least three native hydrophytes are among the list of dominants. Weedy annuals may still be present, but are on a continuing decline. Absolute ground cover is at least 75 percent. At least one primary hydrology indicator is present, distinct, and appropriate for the targeted water regime(s). Volunteer native tree species are establishing (but are not expected to be dominant within the community).
- <u>Year 4</u> The Year 3 thresholds for vegetation and hydrology continue to be met. Weedy annuals are rare. Volunteer native tree species are establishing (but are not expected to be dominant within the community).
- <u>Year 5</u> The Year 3 and 4 thresholds for vegetation and hydrology continue to be met and show all signs of sustainability. The wetland acreage required by the permit will meet the dominance test for wetland vegetation and at least three native hydrophytes will be among the dominant species. Absolute ground cover is at least 75 percent. At least one primary hydrology indicator is present, distinct, and appropriate for the targeted water regime(s). Undesirable species have been stabilized as a non-dominant. Volunteer native tree species are establishing (but are not expected to be dominant within the community).

9.2 Scrub-Shrub and Forested Wetland Mitigation

Scrub-shrub and forested wetland performance standards are listed below. Volunteer shrubs and trees may be selectively retained for potential substitution/replacement.

- Year 1 Planted shrub and tree species are establishing for the appropriate water regime. Dead shrubs and trees will be replaced. Annual and perennial grasses and forbs recruited from the soil, the native wetland seed mixture, and propagules received from adjoining wetlands will begin to become established. Weedy annual species may be present and abundant. Absolute ground cover is at least 25 percent. At least one primary hydrology indicator is present, distinct, and appropriate for the target landscape.
- <u>Year 2</u> Re-planted shrub and tree species are establishing for the appropriate water regime. Species are viable in size and disease resistant. Shrub and tree replacement trending less. All dead shrubs and trees will be replaced. Absolute ground cover, species abundance, and species diversity are greater than Year 1. Undesirable species (i.e. noxious weeds, *Typha spp., Phragmites spp., Phalaris spp.*) are neither dominant nor trending toward dominance. Weedy annuals may still be present or even dominant, but should be less than Year 1. Absolute ground cover is at least 50 percent. At least one primary hydrology indicator is present, distinct, and appropriate for the target landscape.
- <u>Year 3</u> Re-planted shrub and tree species are establishing for the appropriate water regime. Species are viable in size and disease resistant. Shrub and tree replacement trending less. All dead shrubs and trees will be replaced. The plant

distribution shall meet the dominance test standards in the 87 Manual and Regional Supplement. Additionally, there are at least three native hydrophytes among the list of dominants. Absolute ground cover, species abundance, and species diversity are greater than the previous year. Weedy annuals may still be present, but should be less than the previous year. Absolute ground cover is at least 75 percent. At least one primary hydrology indicator is present, distinct, and appropriate for the target landscape.

<u>Years 4 and 5</u> – Shrubs and trees are viable in size and disease resistant. The survival rate, after year 4, shall not be less than 75 percent. If the survival rate is less than 75 percent, the dead shrubs and trees will be replaced. If survival rate of planted shrub and tree species is less than 75 percent of the original count, the shrubs and trees will be replaced to the original 100 percent planting count. A shrub and tree stratum baseline survey will estimate percent for the PSSA and PFOA wetland mitigation areas. The shrub and tree stratum survey will show increasing percent of coverage over the previous year. The baseline survey will include voluntary shrubs and trees.

10 Monitoring

LRC would be fiscally and administratively responsible for annual success monitoring of the Bank. Annual monitoring would identify and document mitigation wetland development and would include the below-defined content.

Wetland monitoring would consist of a comprehensive wetland determination, as described in the in the USACE 1987 Wetland Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (USACE 2010). These methods would be used to determine if successful wetland development has occurred. Transects would be established during the first year of monitoring. In year one, sample points would be taken along each transect in locations where conditions transitioned from upland to wetland, or from one wetland type to another. These established sampling point locations would be used in subsequent years of monitoring to document the Bank's development. Sample points would be examined for the following wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Sample point data would be recorded on wetland determination data forms, associated with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (USACE 2010). Ground-level photo points would also be established during the first year of monitoring to document Bank conditions. The same photo point locations would be used in the following years of monitoring to illustrate the progression of the Bank.

Wetland monitoring would identify the extents of wetland vegetation and hydrology via on-site investigation during the growing season. Global Positioning System (GPS) would be used to map wetland/upland boundaries. Groundwater data from localized wells may be obtained and evaluated. Findings would be analyzed against the performance standards defined in Section 9. Results would be documented in annual monitoring reports that would include narration, figures, wetland determination data forms, and photographs. Annual monitoring reports would be submitted to USACE by December 31.

11 Long-Term Management Plan

LRC would own the Bank and would be responsible for the construction, maintenance, and long-term management of the Bank.² LRC would prepare and file a protective real estate instrument, as discussed in Section 4.

At some point in the future, LRC may elect to transfer ownership of the Bank, or otherwise engage the assistance of other organizations in the long-term management or maintenance of the Bank. In the event LRC intends to transfer ownership, management, or maintenance obligations, LRC shall first obtain consent from USACE. Prior to the closure of the Bank, a long-term management plan would be submitted to USACE for approval.

12 Adaptive Management Plan

In the event that the Bank fails to achieve performance standards, LRC would be responsible for adaptive management and would develop, coordinate, and implement appropriate remedial actions in accordance with the following subsections.

12.1 Procedural Steps

The Bank would be adaptively managed to account for changing and unforeseen circumstances. This would include changes in adjacent land uses, upstream or downstream management issues, or variances in anticipated hydrology. This also includes changes in responsible party. Adaptive management would be achieved through the following process:

- <u>Problem Assessment</u> Identify issues that are prohibiting the Bank from achieving performance standards.
- <u>Action Design</u> Determine how to address the undesired situation and present the solution. Coordinate the Action Design with USACE, and potentially other resource agencies. Include methods to monitor the success of the Action Design.
- <u>Implementation</u> Implement the Action Design.
- <u>Monitoring</u> Monitor the problem area, consistent with the methods established with the Action Design.
- <u>Evaluation and Feedback</u> Document monitoring results in an annual monitoring report (or more frequently, if necessary).

12.2 Extraordinary Circumstances

If during the course of annual monitoring, the likelihood of achieving success criteria appears unlikely, LRC would prepare an analysis of the cause(s) of failure in that year's monitoring report and propose a remedial action. If circumstances beyond LRC's control (for example, significant changes in annual precipitation compared to baseline analysis) occurred during a year of monitoring affecting the development of the site, discussions with USACE would occur to determine if the situation is now normal for the site. In this

² LRC would not be responsible for the requirements of this Site Development Plan, if precluded from performing monitoring, maintenance, or management activities by acts of war, acts of God, rebellion, strikes, or natural catastrophes that are beyond the control of LRC.

event, remedial actions would be proposed. Remedial actions may include additional excavation, reseeding, additional review of local or regional hydrology, re-evaluation of management techniques, and/or development of a new mitigation site. In the event all, or a portion, of the mitigation site fails to achieve the success criteria set forth, LRC would be required to replace the acres on-site or off-site at appropriate ratios.

LRC may request, and USACE may approve, changes to the construction, operation, objectives, performance standards, timelines, or credit generation and award schedule of the Site if an act or event causes substantial damage such that it is determined to be a result of extraordinary circumstances; such act or event has a significant adverse impact on the quality of the aquatic functions, native vegetation, or soils of the Site; and such act or event was beyond the reasonable control of LRC, its agents, contractors, or consultants to prevent or mitigate. Extraordinary circumstances include natural or human-caused catastrophic events or deliberate and unlawful acts by third parties. Examples of a natural catastrophic event include, but are not limited to: a flood equal to or greater in magnitude than the 100-year flood event; earthquakes; drought that is significantly longer than the periodic multi-year drought cycles that are typical of weather patterns in the Midwest; as well as events of the following type when they reach a substantially damaging nature: disease, wildfire, depredation, regional pest infestation, or significant fluviogeomorphic change. Examples of a human-caused catastrophic event include, but are not limited to, substantial damage resulting from war, insurrection, riot or other civil disorders, spill of a hazardous or toxic substance, or fire. Examples of a deliberate and unlawful act include, but are not limited to, substantial damage resulting from the dumping of a hazardous or toxic substance, as well as significant acts of vandalism or arson. The consequences of any extraordinary circumstances shall not affect the status of previously released bank credits, whether or not they have yet been sold, used, or transferred.

13 Financial Assurances

LRC would be responsible for all phases of Bank development: construction, monitoring, maintenance, remedial measures, and overall success.

LRC, a company of good standing and long history within Nebraska, has the financial capacity to implement the Bank, as described herein. LRC would provide documentation (e.g. letter of credit) that identifies LRC's securing of adequate funding for operation and maintenance of the Bank. Written documentation of LRC's financial resource commitments would be provided to USACE under separate cover.

14 References

- LRC. 2019. Final Umbrella Wetland and Stream Banking Agreement. USACE File No. 2017-01821-WEH.
- NDEE. 2021. 2020 Nebraska Water Quality Integrated Report. May.
- USACE. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. January.
- USACE. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0). ERDC/EL TR-10-16. August.
- USACE. 2018. Section 404 Individual Permit for Lyman Richey Corporation Plant 40. 2017-00703-WEH. May 10.
- USACE. 2019. Section 404 Individual Permit for Lyman Richey Corporation Plant 52. 2016-00221-WEH. May 9.



Appendix A Figures





PATH: Z1PROJECTSILYMAN_RICHEY110296199_GRETNABOTTOMMITPHASE2WAP_DOCS'REPORT_MXDIA2_SITEDEVELOPMENTPLAN_GSA.MXD + USER: EMSCHMIT + DATE: 2/24/2022

SITE DEVELOPMENT PLAN



SITE DEVELOPMENT PLAN







Appendix B Historic Aerial Photographs

























Appendix C Plant 52 Wetland Delineation Report




Gretna Bottoms

Lyman-Richey Corporation

Sarpy County, Nebraska

Wetland Delineation Report

June 2015



Lyman-Richey Corporation Gretna Bottoms

Wetland Delineation Report Sarpy County, Nebraska

1. **PROJECT BACKGROUND**

Lyman-Richey Corporation is planning to begin operation of a new sand and gravel mining site located southwest of Gretna in Sarpy County, Nebraska. HDR performed an on-site investigation of wetlands and other water resources on April 28-30, 2015.

2. **PROJECT LOCATION**

The approximate 1,060-acre site is located along Capehart and Fairview Roads adjacent to the confluence of the Platte and Elkhorn Rivers in Sarpy County, Nebraska (approximately 3.6 miles southwest of Gretna, NE). The proposed project would be located in Sections 4, 9, and 16, Township 13 North, Range 10 East (Appendix A, Figure 1 – Project Location Map).

3. WETLAND DELINEATION METHODOLOGY

A desktop analysis of the Study Area was performed prior to the on-site investigation. Information used for this analysis included the following:

- National Wetlands Inventory (NWI) database (USFWS, 1981 present)
- National Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database
- USDA NAIP aerial photography (USDA NAIP, 2014)
- National Wetland Plant List Midwest Region (Lichvar et al., 2014)

On-site wetland delineations were performed in April of 2015 in accordance with the 1987 Corps of Engineers *Wetlands Delineation Manual and Midwest Regional Supplement to the 1987 Wetlands Delineation Manual* (Version 2.0).

The limits of delineated wetlands were determined in the field based on the presence, or assumed presence, of all three required wetland parameters (hydrophytic vegetation, hydric soils, and wetland hydrology). During the delineations, HDR wetland scientists evaluated the potential for Federal jurisdiction of delineated resources.

Delineated wetland boundaries and identified waterways are depicted on Figure 2, Sheets 1-4 (Appendix A). Wetland data forms are provided in Appendix B.



4. AGRICULTURAL WETLAND DELINEATION METHODOLOGY

In association with the desktop survey and specific to the agricultural areas within the Study Area, agricultural wetland determinations were completed in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region pertaining to agricultural lands (Environmental Laboratory, 2010). Prior to field determinations, a desktop survey was conducted using ten years of National Agriculture Imagery Program (NAIP) color aerial imagery (USDA, 2014) to identify farmland that displayed wetland signatures. The ten years of imagery analyzed were 2003, 2004, 2005, 2006, 2007, 2009, 2010, 2012, 2013, and 2014. The years 2004, 2006, 2009, and 2010 represent normal years of precipitation. Years 2003, 2005, 2012, and 2013 were dryer than average, and years 2007 and 2014 were wetter than average. Specific wetland signatures include:

- Hydrophytic vegetation
- Surface water
- Flooded or drowned-out crops
- Stressed crops
- Difference in vegetation within a field due to different planting dates
- Inclusion of wet areas as "set aside"
- Patches of greener vegetation during years of below normal precipitation

Areas that displayed wetland signatures in six or more of the ten selected years of NAIP imagery or three years with the presence of an NWI mapped wetland were identified as potential wetlands and geospatially referenced using Geographic Information Systems (GIS).

Following the desktop survey, HDR conducted ground-truthing from April 28-30, 2015 to determine the presence or absence of hydric soil for each of the potential agricultural wetlands. For larger areas, multiple soil samples were analyzed. Hydric soil determinations were made in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region. Based on field observations, a "Wetland Determination Data Form – Midwest Region" was completed for each sample point. These forms are presented in Appendix A. Sample points were mapped in the field using global positioning system (GPS) technology. Photographic documentation of the sampled areas is included in Appendix C.

5. DELINEATION RESULTS

5.1 Delineated Wetlands

The on-site wetland delineation identified 16 palustrine emergent wetlands, one palustrine forested wetland, and three palustrine scrub-shrub wetlands totaling 28.18 acres. Appendix B contains all wetland data forms, Table 1 includes a summary of the delineated wetland areas, and Figure 2, Sheets 1-4 (Appendix A) provide aerial views of delineated wetlands.

As part of the agricultural wetland determinations, the mapping conventions identified a total of 17 potential agricultural wetlands. Field investigations found nine of the potential agricultural wetlands displaying indicators of hydric soil and therefore met agricultural wetland criteria. The



areas which met agricultural wetland criteria are summarized in Table 2 and the locations of agricultural wetlands are displayed on Figure 2, Sheets 1-4 (Appendix A).

Sample Point ¹	Figure 2 Sheet No.	Wetland Classification (Cowardin ² Nebraska Subclass)	Area (acres)
S-03	1 & 2	PEMA/PEMC Riverine Floodplain	3.14
S-06	1	PEMA/PEMC Riverine Floodplain	2.54
S-09	1	PEMA/PEMC Riverine Floodplain	0.14
S-13	1 & 2	PEMA/PEMC Riverine Floodplain	1.04
S-15	1, 2, & 3	PEMA/PEMC Riverine Floodplain	1.18
S-18	1, 2, 3, & 4	PEMA/PEMC Riverine Floodplain	3.02
S-20	3 & 4	PEMA/PEMC Riverine Floodplain	0.86
S-23	3 & 4	PEMA/PEMC Riverine Floodplain	0.58
S-24	3 & 4	PEMA/PEMC Riverine Floodplain	1.32
S-26	3 & 4	PEMA/PEMC Riverine Floodplain	2.25
S-29	2 & 3	PSSA Riverine Floodplain	0.08
S-31	2 & 3	PEMA/PEMC Riverine Floodplain	0.23
S-34	4	PEMA/PEMC Riverine Floodplain	0.42
S-36	3 & 4	PEMA/PEMC Riverine Floodplain	0.23
S-38	3 & 4	PEMA/PEMC Riverine Floodplain	1.00
S-39	3 & 4	PSSA Riverine Floodplain	2.66
S-40	3 & 4	PFOA Riverine Floodplain	2.21
S-45	4	PSSA Riverine Floodplain	1.97
S-47	4	PEMA/PEMC Riverine Floodplain	0.57
S-51	3 & 4	PEMA/PEMC Riverine Floodplain	2.74
		Total	28.18

Table 1. Delineated Wetlands

Notes:

1 Sample Points not provided did not meet wetland criteria.

2 PEMA = Palustrine Emergent Temporarily Flooded; PEMC = Palustrine Emergent Seasonally Flooded; PFOA = Palustrine Forested Temporarily Flooded; PSSA = Palustrine Scrub-Shrub Temporarily Flooded





		FSA Aerials - Enter wetland signature from list below ¹										Meets Hydric Soil	
Sample Point	2003	2004	2005	2006	2007	2009	2010	2012	2013	2014	Meets Desktop Determination	Criteria (Sample Points)	Acres
Ag-01		4*	4*	4*	4*		4*		4*	4*	Ν	N (Ag-01, 02)	
Ag-03	4*		4*	4*	4*		4*		4*	4*	Ν	N (Ag-03)	
Ag-04	4	4	4				4	4	4	4	Y	Y (Ag-04)	0.44
Ag-06	4	4				4	4	4	4	4	Y	Y (Ag-06, 07, 08)	2.47
Ag-09	4*					1*	1*	1*	4*	1*	Ν	N (Ag-09)	
Ag-10		4*	1*	1*		1*	1*	1*		4*	Ν	N (Ag-10)	
Ag-11		4*	1*	1*		1*	1*	1*			Ν	N (Ag-11)	
Ag-12	4*	4*	1*	1*		1*	1*	1*			Ν	N (Ag-12)	
Ag-13	4*	4*	1*	1*		1*	1*	1*			Ν	N (Ag-13)	
Ag-14	4*	4*					1*	1*	4*	1*	Ν	N (Ag-14)	
Ag-15	4	4	4	4	4	4		4	4	4	Y	Y (Ag-15, 16)	3.82
Ag-17	4		4	4	4	4		4	4	4	Y	Y (Ag-17, 18)	3.79
Ag-19	4	4	4	4	4	4		4	4	4	Y	Y (Ag-19, 20)	2.18
Ag-21	4	4		4			4	4		4	Y	Y (Ag-21)	1.99
Ag-22**	4		4	4						4	Ν	Y (Ag-22)	1.34
Ag-23	4			4	4	4	4	4		4	Y	Y (Ag-23)	3.70
AG-24		4	4			4	4	4		4	Y	Y (Ag-24)	0.18
												Total	19.91

Table 2. Agricultural Wetland Results

Notes: ¹Wetland Signatures:

1 - Hydrophytic vegetation (observed as different color than crop or forage)

2 - Surface water (oxbows, depressions, etc.)

3 - Flooded or drowned out crops, wet/base soil within cropped fields

4 - Stressed crops due to wetness (crop stress is seen on the aerials as areas of yellowish tined crop, or sparse canopy coverage of crop)

5 - Difference in vegetation within field due to different planting dates

6 - Inclusion of wet areas as set aside

7 - Patches of greener vegetation during the years of below normal precipitation (use only as a signature for a "dry year")

* - Field visit determined signatures were due to stress from dryness, not wetness; non-hydric soil present

** - Area did not meet desktop determination; however, obvious wetland signatures were observed in the field



5.2 Other Water Resources

In addition to delineating wetlands, the survey also identified five non-wetland water resources (e.g. waterway, pond, lake, canal, etc.). Table 3 provides a summary of the non-wetland water resources. According to the National Hydrography Dataset (NHD) (USGS, 2014), only one named waterway intersects the Study Area (the Western Sarpy Ditch). The NHD is a national coverage of drainage networks (including rivers, streams, canals, lakes, ponds, etc.) developed by the USGS that is designed to be used in general mapping and in the analysis of surface water systems (USGS, 2014). The Waters of the U.S. Determination Data Forms used to evaluate these waterways are located in Appendix B. In addition to linear waterways, two open water areas were delineated within the Study Area. Figure 2, Sheets 1-4 (Appendix A) depict the locations of the waterways and open water areas in the Study Area.

Report ID	Figure 2 Sheet No.	Name	Туре
S-02	1	Unnamed	Open Water
WUS-01	1, 2, & 3	Unnamed	Perennial Waterway
WUS-02	1, 2, 3, & 4	Western Sarpy Ditch	Perennial Waterway
WUS-03	1 & 2	Unnamed	Intermittent Waterway
S-33	3 & 4	Unnamed	Open Water

Table 3. Non-Wetland Water Resources

6. **DISCUSSION**

The Study Area consists primarily of agricultural land within the Elkhorn and Platte River floodplains. Hydrology in the area is likely supplied by groundwater and overbank flooding of the Elkhorn and Platte Rivers. Although several NHD mapped waterways are within the Study Area, only three waterways were observed to be present during the field visit. Several of the ditches containing these NHD mapped waterways were inundated, however, there was no evidence of flow and wetland vegetation was established within the slopes of the ditches; therefore these areas were mapped as emergent wetlands.



7. **REFERENCES**

- Cowardin, et al., December 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. FWS/OBS-79/31. U.S. Department of the Interior, Washington D.C.
- Environmental Laboratory, January 1987. *Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1. U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, Mississippi.
- Environmental Laboratory, March 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region*. U.S. Army Corps of Engineers Research and Development Center, Vicksburg, Mississippi.
- Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2014. *The National Wetland Plant List: 2014 Update of Wetland Ratings*. Phytoneuron 2014-41: 1-42.
- Natural Resources Conservation Service. March 1998. Northern Plains Region Wetland Determination and Delineation Procedure. United States Department of Agriculture.
- Natural Resources Conservation Service. United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Sarpy County, Nebraska. Available online at http://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=NE.
- U.S. Fish and Wildlife Service, 1981 present. *Digital National Wetland Inventory Mapping*. St. Petersburg, Florida.
- U.S. Department of Agriculture Natural Agricultural Imagery Program, 2014. Rectified Digital Imagery.
- U.S. Department of Agriculture Natural Resources Conservation Service, no date available. *Nebraska Wetland Subclasses, Attachment K.* Prepared jointly by NRCS, USACE, and NGPC.
- U.S. Geological Survey, 2014. National Hydrography Dataset (NHD). http://nhd.usgs.gov/

<u>Appendix A</u>

Figure 1 – Project Location Map Figure 2 – Aquatic Resources











Appendix B

Wetland Determination and Waters of the U.S. Data Forms

Project/Site: Gretna Bottoms		City/Count	y:	Sarpy Coun	nty S	Sampling Date:	4/28/201	15	
Applicant/Owner: Lyman-Richey Co	orporation			State	: NE	Sampling Point:	Ag-01		
Investigators: Ben Fisher	Austin Zigler			Section, Tov	vnship, Range	S 4 T 13N	R 1	0E	
Landform (hillslope, terrace, etc.):	Depression			Local Rel	ief (concave, co	nvex, none): No	ne		
Slope(%): 0 Lat: 41	1.123288314774	Long: -	96.30844085	8776	Datum:	NAD 1983			
Soil Map Unit Name:Gibbon loamy	fine sand, overwash, occa	asionally floo	ded		NWI Classificat	ion: None			
Are climatic / hydrologic conditions on the	he site typical for this time	of year?	Yes X	No	(If No, expla	ain in Remarks)			
Are Vegetation, Soil, Hy	drology, significantly	y disturbed?	A	Are "Normal	Circumstances"	present? Yes	Х	No	
Are Vegetation, Soil, Hye	drology, naturally pr	oblematic?		(If needed,	explain any ans	wers in Remarks.)		
SUMMARY OF FINDINGS - A	ttach a site map sho	wing san	npling poi	nt locatio	ns, transect	s, important	featur	es, et	с.
Hydrophytic Vegetation Present?	Yes X No								
Hydric Soil Present?	Yes No X	Is the Sa within a	ampled Area Wetland?		Voc	No X			
Wetland Hydrology Present?	Yes No X				165		-		
Remarks:									
The area characterized by this data for	m is an upland agricultural	l field. The a	rea failed to m	neet hydric s	oils and wetland	hydrology criteria	a; howe	ver, the	
area does meet hydrophytic vegetation	remena. Agricultural crops	filad not bee	in planted as						
		Absolute	Dominant	Indicator					
VEGETATION_ Use scientific	names or plants.	% Cover	Species	<u>Status</u>	Dominance 1	Test Worksheet:			
<u>Tree Stratum</u>					Number of D	ominant Species		1	(Δ)
Shrub Stratum					That Are OBI	L, FACW, or FAC:		1	_ (~)
Herb Stratum (Plot size: 0	6 Ft)				Total Number	of Dominant			
Plantago rugelii	,	30	Y	FAC	Species Acro	ss all Strata:		1	(B)
		30	=Total Cover		Percent of Do	minant Species	4		
Vine Stratum					That Are OBL	, FACW, or FAC:	1	00.0%	(A/B)
					Prevalence I	ndex Worksheet:			
					Total % C	Cover of:	Multir	oly by:	
					OBL species	0	x 1 =	0	
					FACW specie	es 0	x 2 =	0	
					FAC species	30	x 3 =	90	
					FACU specie	es 0	x 4 =	0	
					UPL species	0	x 5 =	0	
					Column Total	s: 30	(A)	90	(B)
					Prevale	ence Index = B/A=	· · · _	3.00	
					Ludrophytic \	logotation Indias	toro		
						et for Hydrophytic	Vogota	tion	
							vegela	lion	
						ce rest > 50%			
						ce index = 3.0	(Drovik		orting
					data in R	emarks or on a se	parate	sheet)	Jung
					Problema	atic Hydrophytic V	egetatio	n (Exp	olain)
					Indicators of be present, u	hydric soil and we unless disturbed o	tland h	ydrology matic.	/ must
					Hydrophy	ytic			
					Vegetation P	resent? Yes	N X	No	
Remarks: (Include photo numbers here Hydrophytic vegetation criteria is met	e or on a separate sheet.)								



Depth		Matrix			۳ ۰.۰		atures		-			. .
(inches)	Color	(moist)	%	Color (moist)	%	Туре	LOC 2	I	exture		Remarks
to 4	10YR	4/2	100						FINE SAND)		
to 18	10YR	6/2	60				. <u> </u>		COARSE S	AND	Mi	xed Matrix
to 18	10YR	2/1	40						SILTY CLA	Y LOAM	Mi	xed Matrix
to 24	10YR	4/1	75	7.5YR	8 4/6	5	С	M	SILTY CLA	Y LOAM	Mi	xed Matrix
to 24	10YR	5/2	20						COARSE S	AND	Mi	xed Matrix
pe: C=Conce	entration, D	=Depletion,	RM=Redu	ced Martix	, CS=C	overed o	r Coated	Sand Gra	ins. 4	ocation: PL=Pore	Elining, M=I	Matrix.
dric Soil Inc	dicators:								Indica	tors for Problen	natic Hydri	c Soils: ³
Histosol (A1)				Sandy C	Gleyed M	atrix (S4)				oast Prairie Redox (A16)	
Histic Epiped	on (A2)			Sandy F	Redox (S	5)				on-Manganese Mass	ses (F12)	
Black Histic (A3)			Stripped	d Matrix (S6)				ark Surface (S7)		
Hydrogen Su	lfide (A4)			Loamy I	Mucky Mi	ineral (F1)					((TE40)	
Stratified Lay	ers (A5)			Loamy	Gleyed M	latrix (F2)				ery Snallow Dark Su	nace (TF12)	
2 cm Muck (A	A10)			Deplete	d Matrix ((F3)				ther (Explain in Rem	narks)	
Depleted Belo	ow Dark Sur	face (A11)		Redox [Dark Surf	ace (F6)						
Thick Dark S	urface (A12)			Deplete	d Dark S	urface (F7)					
Sandy Mucky	Mineral (S1)		Redox	Depressio	ons (F8)			³ Inc	dicators of hydrophy	tic vegetation	and
5 cm Mucky F	Peat or Peat	(S3)			·				weu	disturbed or pr	oblematic.	mess
Type: Depth (inches	e Layer (i	f observed	d):						Hydric S	Soil Present?	Yes	No
Restrictive Type: Depth (inches marks: the observed so	e Layer (i	f observed	d):	nydric soil.					Hydric S	Soil Present?	Yes	No
Restrictive Type: Depth (inchess marks: he observed so	e Layer (i	if observed	d):	nydric soil.					Hydric S	Soil Present?	Yes	No
Restrictive Type: Depth (inchest narks: e observed so DROLOGY etland Hydr	e Layer (i	d to display in cators:	d):	nydric soil.	nat anni				Hydric S	Soil Present?	Yes _	No
Restrictive Type: Depth (inches marks: e observed so DROLOGY etland Hydrr imary Indicat	e Layer (i s): il profile faile orogy Indi ors (minim	if observed ad to display in cators: um of one is	d):	nydric soil.	nat appl	y)	(80)		Hydric S	Soil Present?	Yes rs (minimun	No
Restrictive Type: Depth (inchest marks: e observed so DROLOGY etland Hydre imary Indicat Surface Wate High Water T	e Layer (i s): il profile faile ology Indi ors (minim ar (A1) able (A2)	if observed ad to display in cators: um of one is	d):	hydric soil.	nat apply	y) ed Leaves	(B9)		Hydric S	Soil Present?	Yes rs (minimun il Cracks (B6) atterns (B10)	No
Restrictive Type: Depth (inchest narks: e observed so DROLOGY etland Hydr imary Indicat Surface Wate High Water T Saturation (A)	e Layer (i	if observed ad to display in cators: um of one is	d):	nydric soil. check all th Quat Aqua True	nat apply er-Staine atic Faun	y) ed Leaves a (B13) Plants (B	(B9)		Hydric S	Soil Present?	Yes rs (minimun il Cracks (B6) atterns (B10) n Water Table	n of two requir
Restrictive Type: Depth (inchess marks: e observed so DROLOGY etland Hydre imary Indicat Surface Wate High Water T Saturation (A: Water Marks	e Layer (i s): il profile faile orors (minim er (A1) able (A2) 3) (B1)	if observed ad to display in cators: um of one is	d):	hydric soil. check all th Wat Aqua True Hydi	nat appl er-Staine atic Faun e Aquatic rogen Su	y) Id Leaves a (B13) Plants (B	(B9) 14) (C1)		Hydric S	Soil Present? econdary Indicato Surface So Drainage P Dry-Seasor Crayfish Bu	Yes rs (minimun il Cracks (B6) atterns (B10) n Water Table urrows (C8)	n of two requir
Restrictive Type: Depth (inchest marks: e observed so DROLOGY etland Hydre imary Indicat Surface Wate High Water T Saturation (Ai Water Marks Sediment Dep	e Layer (i s): il profile faile ors (minim ors (minim er (A1) iable (A2) 3) (B1) posits (B2)	if observed ad to display in cators: um of one is	d):	nydric soil. check all th Question Aque Aquestion True Question Aquestio	nat appl er-Staine atic Faun a Aquatic rogen Su lized Rhiz	y) Id Leaves a (B13) Plants (B Ifide Odor zospheres	(B9) 14) (C1) • along Livir	ng Roots (0	Hydric S	Soil Present? econdary Indicato Surface So Drainage P Dry-Seasor Crayfish Bu Saturation	Yes rs (minimun il Cracks (B6) atterns (B10) n Water Table irrows (C8) Visible on Aei	n of two requir
Restrictive Type: Depth (inchest marks: e observed so DROLOGY tland Hydre mary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment Dep Drift Deposits	e Layer (i s): il profile faile ors (minim er (A1) able (A2) 3) (B1) posits (B2) 5 (B3)	d to display in cators: um of one is	d):	check all t check all t dual check all check all t dual check all check all c	nat apply er-Staine atic Faun e Aquatic rogen Su lized Rhiz sence of F	y) ed Leaves a (B13) Plants (B Ifide Odor zospheres Reduced I	(B9) 14) (C1) : along Livir ron (C4)	ng Roots (0	Hydric S	Soil Present? econdary Indicato	Yes rs (minimun il Cracks (B6) atterns (B10) n Water Table urrows (C8) Visible on Aer Stressed Plar	n of two requir (C2) rial Imag.(C9)
Restrictive Type: Depth (inchest harks: e observed so DROLOGY tland Hydr mary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment Dep Drift Deposits Algal Mat or (e Layer (i s): il profile faile ors (minim er (A1) able (A2) 3) (B1) posits (B2) 5 (B3) Crust (B4)	if observed ad to display in cators: um of one is	d):	check all the soil.	nat apply er-Staine atic Faun Aquatic rogen Su lized Rhiz sence of f ent Iron F	y) ed Leaves a (B13) Plants (B lfide Odor zospheres Reduced I Reduction	(B9) 14) (C1) • along Livir ron (C4) in Plowed 3	ng Roots (C Soils (C6)	Hydric S	econdary Indicato	Yes rs (minimun il Cracks (B6) atterns (B10) n Water Table urrows (C8) Visible on Aei Stressed Plar c Position (D2	<u>No</u> <u>n of two requir</u> (C2) rial Imag.(C9) nts (D1) 2)
Restrictive Type: Depth (inchess marks: e observed so DROLOGY etland Hydre imary Indicat Surface Wate High Water T Saturation (A Water Marks Sediment Dep Drift Deposits Algal Mat or (Iron Deposits	e Layer (i s):	if observed ad to display in cators: um of one is	d):	nydric soil. check all tl Quations Aquati	hat apply er-Staine atic Faun e Aquatic rogen Su lized Rhiz sence of F ent Iron F a Muck So	y) ed Leaves a (B13) Plants (B Ifide Odor zospheres Reduced I Reduction urface (C7	(B9) 14) (C1) : along Livir ron (C4) in Plowed S	ng Roots (C Soils (C6)	Hydric S	econdary Indicato	Yes rs (minimun il Cracks (B6) atterns (B10) n Water Table urrows (C8) Visible on Aei Stressed Plar c Position (D2 al Test (D5)	n of two requir e (C2) rial Imag.(C9) nts (D1) 2)
Restrictive Type: Depth (inchest marks: e observed so DROLOGY etland Hydre imary Indicat Surface Wate High Water T Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or (Iron Deposits Inundation Vi	e Layer (i s): il profile faile ors (minim er (A1) able (A2) 3) (B1) posits (B2) 5 (B3) Crust (B4) (B5) sible on Aer	if observed ad to display in cators: um of one is al Imagery (B	d):	check all ti	nat apply er-Staine atic Faun e Aquatic rogen Su lized Rhiz sence of F ent Iron F h Muck Si ige or We	y) ed Leaves a (B13) Plants (B Ifide Odor zospheres Reduced I Reduction urface (C7 ell Data (D	(B9) 14) (C1) along Livir ron (C4) in Plowed 3 7) 9)	ng Roots (C Soils (C6)	Hydric S	Soil Present? econdary Indicato condary Indica	Yes rs (minimun il Cracks (B6) atterns (B10) n Water Table urrows (C8) Visible on Aei Stressed Plar c Position (D2 al Test (D5)	n of two requir e (C2) rial Imag.(C9) nts (D1) 2)
Restrictive Type: Depth (inchest narks: e observed so DROLOGY etland Hydr imary Indicat Surface Wate High Water T Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or (Iron Deposits Inundation Vii Sparsely Veg	e Layer (i s): il profile faile ors (minim ors (minim ors (A1) able (A2) 3) (B1) posits (B2) s (B3) Crust (B4) (B5) sible on Aeri etated Conc	if observed id to display in cators: um of one is al Imagery (B ² ave Surf. (B8)	<pre>d): </pre>	check all the solution of the	nat apply er-Staine atic Faun e Aquatic rogen Su lized Rhiz sence of f ent Iron F n Muck Si ge or We er (Explai	y) ed Leaves a (B13) Plants (B lfide Odor zospheres Reduced I Reduction urface (C7 ell Data (D in in Rema	(B9) 14) (C1) along Livir ron (C4) in Plowed S 7) 9) arks)	ng Roots (C Soils (C6)	Hydric S	econdary Indicato	Yes rs (minimun il Cracks (B6) atterns (B10) n Water Table urrows (C8) Visible on Aer Stressed Plar c Position (D2 al Test (D5)	n of two requir (C2) rial Imag.(C9) nts (D1) 2)
Restrictive Type: Depth (inchess marks: le observed so DROLOGY etland Hydre imary Indicat Surface Wate High Water T Saturation (A: Water Marks Sediment Dep Drift Deposits Algal Mat or O Iron Deposits Inundation Vi Sparsely Veg	e Layer (i s): il profile faile ors (minim ors (minim ors (minim ors (A1) iable (A2) 3) (B1) posits (B2) 5 (B3) Crust (B4) (B5) sible on Aeri ietated Conc	if observed ad to display in cators: um of one is al Imagery (B' ave Surf. (B8)	<pre>d): </pre>	check all th	nat apply er-Staine atic Faun e Aquatic rogen Su lized Rhiz sence of f ent Iron F h Muck Su ge or We er (Explai	y) d Leaves a (B13) Plants (B Ifide Odor zospheres Reduced I Reduction urface (C7 ell Data (D in in Rema	(B9) 14) (C1) along Livir ron (C4) in Plowed S ') 9) arks)	ng Roots (C Soils (C6)	Hydric S	econdary Indicato	Yes rs (minimun il Cracks (B6) atterns (B10) n Water Table urrows (C8) Visible on Aei Stressed Plar c Position (D2 al Test (D5)	n of two requir e (C2) rial Imag.(C9) nts (D1) 2)
Restrictive Type: Depth (inchess marks: ne observed so DROLOGY etland Hydre timary Indicat Surface Wate High Water T Saturation (A: Water Marks Sediment Deposits Algal Mat or C Iron Deposits Inundation Vie Sparsely Veg etla Observat	e Layer (i s): il profile faile ors (minim er (A1) able (A2) 3) (B1) posits (B2) 5 (B3) Crust (B4) (B5) sible on Aeri etated Conc tions: Present?	if observed ad to display in cators: um of one is al Imagery (B' ave Surf. (B8) Yes	<pre>d): </pre>	check all the soil.	nat apply er-Staine atic Faun e Aquatic rogen Su lized Rhiz sence of R ent Iron F h Muck Su ige or We er (Explai Depth	y) ed Leaves a (B13) Plants (B Ifide Odor zospheres Reduced I Reduction urface (C7 ell Data (D in in Rema (inches):	(B9) 14) (C1) along Livir ron (C4) in Plowed S 7) 9) arks)	ng Roots (C Soils (C6)	Hydric S	Soil Present?	Yes rs (minimun il Cracks (B6) atterns (B10) n Water Table urrows (C8) Visible on Aeu Stressed Plar c Position (D2 al Test (D5)	<u>n of two requir</u> (C2) rial Imag.(C9) nts (D1) 2)
Restrictive Type: Depth (inchest marks: te observed so DROLOGY etland Hydre rimary Indicat Surface Wate High Water T Saturation (A) Water Marks Sediment Dep Drift Deposits Algal Mat or (I) Iron Deposits Inundation Vi Sparsely Veg 2Id Observat Surface Water	e Layer (i s): il profile faile ors (minim er (A1) able (A2) 3) (B1) posits (B2) 5 (B3) Crust (B4) (B5) sible on Aeri etated Conc tions: Present?	if observed and to display in cators: um of one is al Imagery (B' ave Surf. (B8) Yes Yes	<pre>d): </pre>	check all the soil.	hat apply er-Staine atic Faun e Aquatic rogen Su lized Rhiz sence of f ent Iron F h Muck Sr ige or We er (Explai Depth Depth	y) ed Leaves a (B13) Plants (B lfide Odor zospheres Reduced I Reduction urface (C7 ell Data (D in in Rema (inches): (inches):	(B9) 14) (C1) along Livir ron (C4) in Plowed S r) 9) arks)	ng Roots (C Soils (C6)	Hydric S	econdary Indicato	Yes rs (minimun il Cracks (B6) atterns (B10) n Water Table urrows (C8) Visible on Aer Stressed Plar c Position (D2 al Test (D5)	<u>No</u> <u>n of two requir</u> (C2) rial Imag.(C9) nts (D1) 2)

Remarks:

The area failed to meet wetland hydrology criteria.

Project/Site: Gretna Bottom	s	City/Count	ty:	Sarpy Coun	ity S	Sampling Date	: 4/28/	2015	
Applicant/Owner: Lyman-Ri	chey Corporation			State	: NE	Sampling Poir	nt: Ag-C)2	
Investigators: Ben Fisher	Austin Zigle	r		Section, Tov	vnship, Range	S 4 T 1	3N F	२ 10E	
Landform (hillslope, terrace, etc.	.): Depression			Local Rel	ief (concave, co	nvex, none):	None		
Slope(%): 0	Lat: 41.1230117481571	Long: -	96.30867584	36195	Datum:	NAD 1983			
Soil Map Unit Name: Gibbon	n loamy fine sand, overwash, occ	asionally floo	ded		NWI Classificat	ion: None			
Are climatic / hydrologic condition	ons on the site typical for this time	e of year?	Yes X	No	(If No, expla	ain in Remarks	5)		
Are Vegetation, Soil	, Hydrology, significant	tly disturbed?	1	Are "Normal	Circumstances"	present?	res X	No	
Are Vegetation, Soil	, Hydrology, naturally p	oroblematic?		(If needed,	explain any ans	wers in Rema	ırks.)		
SUMMARY OF FINDING	S - Attach a site map sh	owing sar	nplina poi	nt locatio	ns. transect	s. importa	nt feat	ures. et	c.
Hydrophytic Vegetation Preser	nt? Yes X No	<u> </u>	<u></u>					<u>,</u>	
Hydric Soil Present?	Yes No X	Is the Sa	ampled Area						
Wetland Hydrology Present?	Yes No X	within a			Yes	No	X		
Remarks:									
The area characterized by this however, the area does meet h	data form is an upland area in ar ydrophytic vegetation criteria. Ag	n agricultural f pricultural crop	field. The area	a failed to me en planted as	eet hydric soils a s of the date of t	and wetland hy he field visit.	/drology (criteria;	
VEGETATION- Use scie	entific names of plants.	<u>Absolute</u> <u>% Cover</u>	Dominant Species	Indicator Status	Dominance T	Fest Workshe	et:		
Tree Stratum					Number of D That Are OB	ominant Spec L, FACW, or F	ies AC:	1	(A)
Shrub Stratum							-		_
Herb Stratum (Plot	size: <u>6 Ft</u>)				Total Number Species Acro	r of Dominant		1	(B)
Plantago rugelii			Y	FAC			-	·	_(D)
Vine Stratum		30	_=Total Cover		Percent of Do That Are OBL	ominant Speci ., FACW, or F	es AC: –	100.0%	(A/B)
					Prevalence I	ndex Worksh	eet:		
					Total % 0	Cover of:	Μu	ultiply by:	
					OBL species	0	x 1	= 0	
					FACW specie	es 0	x 2	= 0	
					FAC species	30	х 3	= 90	
					FACU specie	es0	x 4	= 0	
					UPL species	0	x 5	= 0	
					Column Total	s. 30) (A)	90	(B)
					Prevale	ence Index = E	3/A=	3.00	
					Hydrophytic	Vegetation In	dicators	<u> </u>	
					Ranid Te	st for Hydroph	wtic Veg	• etation	
					X Dominan	ce Test > 50%	//////////////////////////////////////	station	
					X Prevalen	ce Index < 3 ()		
					Morpholo	orical Adaptati	ions (Pro	ovide supr	ortina
					data in R	emarks or on	a separa	te sheet)	Jorang
					Problema	atic Hydrophyt	ic Vegeta	ation (Exp	plain)
					Indicators of be present, u	hydric soil an unless disturb	d wetland ed or pro	1 hydrolog blematic.	iy must
					Hydroph Vegetation P	ytic resent? Y	es X	No	
Remarks: (Include photo numb Hydrophytic vegetation criteria	ers here or on a separate sheet.) is met.								



(inches) Color (mo	oist) %	% Color	(moist)	%	Type 1	Loc ²	Texture	Rem	arks
to 4 10YR	3/2 100)		·			FINE SAND		
to 6 10YR	5/2 100)					COARSE SAND		
to 18 10YR	2/1 100)					SILTY CLAY LOAM		
3 to 24 10YR	3/1 100)					SILT LOAM		
ype: C=Concentration, D=De	epletion, RM=R	Reduced Mart	ix, CS=Co	vered or	Coated Sa	and Grai	ns. ² Location: PL=Pore Lining	g, M=Matrix.	
vdric Soil Indicators:							Indiactors for Droblematic l	II.duia Saila	. 3
Histosol (A1)		Sandy	Gleyed Mat	trix (S4)				nyuric Sons	<u>.</u>
Histic Epipedon (A2)		Sandy	Redox (S5))			Coast Prairie Redox (A16)		
Black Histic (A3)			nodex (66)	, (6)			Iron-Manganese Masses (F1	12)	
							Dark Surface (S7)		
							Very Shallow Dark Surface (TF12)	
Stratified Layers (A5)		Loamy	Gleyed Ma	atrix (F2)			Other (Explain in Remarks)		
」 2 cm Muck (A10)		Deplet	ed Matrix (F	-3)					
Depleted Below Dark Surface	(A11)	Redox	Dark Surfa	ce (F6)					
Thick Dark Surface (A12)		Deplet	ed Dark Su	rface (F7))		3		
Sandy Mucky Mineral (S1)		Redox	Depression	ns (F8)			Indicators of hydrophytic vege wetland hydrology must be pre	etation and	
5 cm Mucky Peat or Peat (S3))						disturbed or problema	atic.	
Restrictive Layer (if o	bserved):								
	-								
Type:									
Type: Depth (inches): emarks: 'he observed soil profile failed to	display indicator	rs of hydric soil.					Hydric Soil Present?	Yes	No
Type: Depth (inches): emarks: he observed soil profile failed to YDROLOGY	display indicator	rs of hydric soil.					Hydric Soil Present?	Yes	No
Type: Depth (inches): emarks: he observed soil profile failed to YDROLOGY Yetland Hydrology Indicated trimary Indicators (minimum	display indicator	rs of hydric soil.	that apply)			Hydric Soil Present?	Yes	
Type: Depth (inches): emarks: he observed soil profile failed to //DROLOGY //etland Hydrology Indicator rimary Indicators (minimum	display indicator ors: of one is requir	rs of hydric soil. red; check all	that apply)	(RQ)		Hydric Soil Present?	Yes	No
Type: Depth (inches): emarks: he observed soil profile failed to //DROLOGY //etland Hydrology Indicator rimary Indicators (minimum] Surface Water (A1)] High Water Table (A2)	display indicator	rs of hydric soil.	that apply, ater-Stained) I Leaves ((B9)		Hydric Soil Present?	Yes nimum of two ks (B6) s (B10)	No
Type: Depth (inches): emarks: he observed soil profile failed to //DROLOGY //etland Hydrology Indicate rimary Indicators (minimum] Surface Water (A1)] High Water Table (A2)] Saturation (A2)	display indicator	red; check all	that apply) ater-Stained uatic Fauna) / Leaves (((B13) 2)ants (B1	(B9)		Hydric Soil Present?	Yes nimum of two ks (B6) s (B10) r Table (C2)	No
Type: Depth (inches): emarks: the observed soil profile failed to XDROLOGY Yetland Hydrology Indicato trimary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	display indicator	red; check all	that apply) ater-Stained uatic Fauna ue Aquatic F) I Leaves (I (B13) Plants (B1	(B9) (4)		Hydric Soil Present?	Yes nimum of two ks (B6) s (B10) r Table (C2) (C8)	No
Type: Depth (inches): emarks: he observed soil profile failed to (DROLOGY (etland Hydrology Indicato rimary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	display indicator	red; check all	that apply) ater-Stained uatic Fauna ie Aquatic F drogen Sulfi idized Rhizc) I Leaves (I (B13) Plants (B1 ide Odor	(B9) 4) (C1) along Living	Roots (C	Hydric Soil Present?	Yes nimum of two ks (B6) s (B10) r Table (C2) (C8) on Aerial Imag	No
Type: Depth (inches): emarks: he observed soil profile failed to XDROLOGY Yetland Hydrology Indicato trimary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	display indicator	red; check all wa Aq Druck Pre	that apply) ater-Stained uatic Fauna ue Aquatic F drogen Sulfi idized Rhizo) I Leaves (I (B13) Plants (B1 ide Odor ospheres educed Ir	(B9) (4) (C1) along Living ron (C4)	Roots (C	Hydric Soil Present? Secondary Indicators (mi Surface Soil Crack Drainage Patterns Dry-Season Wate Crayfish Burrows (3) Stunted or Stresse	Yes nimum of two ks (B6) s (B10) r Table (C2) (C8) on Aerial Imag ed Plants (D1)	No
Type: Depth (inches): emarks: 'he observed soil profile failed to VDROLOGY /etland Hydrology Indicato Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	display indicator	red; check all	that apply, ater-Stained uatic Fauna ue Aquatic P drogen Sulfi idized Rhizo esence of Ri cent Iron Re) I Leaves (I (B13) Plants (B1 ide Odor ospheres educed Ir eduction i	(B9) (4) (C1) along Living ron (C4) n Plowed Sc	Roots (C	Hydric Soil Present?	Yes nimum of two ks (B6) s (B10) r Table (C2) (C8) on Aerial Imag ed Plants (D1) ion (D2)	No
Type: Depth (inches): emarks: The observed soil profile failed to YDROLOGY /etland Hydrology Indicato Primary Indicators (minimum 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)	display indicator	red; check all red; check all Aq Tru Hy Ox Re Th Tru Tru Tru Tru Tru Tru Tru Tru	that apply) ater-Stained uatic Fauna ie Aquatic F drogen Sulfi idized Rhizo esence of Ri cent Iron Re in Muck Sui) I Leaves (I (B13) Plants (B1 ide Odor ospheres educed Ir eduction i rface (C7'	(B9) (4) (C1) along Living ron (C4) in Plowed Sc)	Roots (C	Hydric Soil Present? Secondary Indicators (mi Surface Soil Cracl Drainage Patterns Dry-Season Wate Crayfish Burrows 3) Saturation Visible Stunted or Stresse Geomorphic Posit FAC-Neutral Test	Yes nimum of two ks (B6) s (B10) r Table (C2) (C8) on Aerial Imag ed Plants (D1) ion (D2) (D5)	No
Type: Depth (inches): emarks: The observed soil profile failed to YDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum 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 In	display indicator	red; check all red; check all Aq Aq Aq Pre Re Re Ga	that apply) ater-Stained uatic Fauna ue Aquatic F drogen Sulfi idized Rhizo esence of R cent Iron Re in Muck Sur auge or Well) I Leaves (I (B13) Plants (B1 ide Odor ospheres educed Ir eduction i rface (C7) I Data (D2	(B9) (4) (C1) along Living ron (C4) in Plowed Sc) 9)	Roots (C	Hydric Soil Present? Secondary Indicators (mi Surface Soil Cract Drainage Patterns Dry-Season Wate Crayfish Burrows () Saturation Visible Stunted or Stresse () Geomorphic Posit () FAC-Neutral Test	Yes nimum of two ks (B6) s (B10) r Table (C2) (C8) on Aerial Imag ed Plants (D1) ion (D2) (D5)	No
Type: Depth (inches): emarks: 'he observed soil profile failed to WDROLOGY Vetland Hydrology Indicato Primary Indicators (minimum 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 In Sparsely Vegetated Concave	display indicator ors: of one is requir nagery (B7) Surf. (B8)	red; check all red; check all Wa Aq Tru Hy Ox Re Re Th Ga Ott	that apply) ater-Stained uatic Fauna ue Aquatic F drogen Sulfi idized Rhizo esence of R cent Iron Re in Muck Sur auge or Well her (Explain) I Leaves (1 (B13) Plants (B1 ide Odor ospheres educed Ir eduction i rface (C7) I Data (DS 1 n Rema	(B9) (C1) along Living ron (C4) in Plowed Sc) 9) irks)	Roots (C bils (C6)	Hydric Soil Present? Secondary Indicators (mi Surface Soil Crace Drainage Patterns Dry-Season Wate Crayfish Burrows 3) Saturation Visible Stunted or Stresse Geomorphic Posit FAC-Neutral Test	Yes nimum of two ks (B6) s (B10) r Table (C2) (C8) on Aerial Imag ed Plants (D1) iion (D2) (D5)	No
Type: Depth (inches): emarks: The observed soil profile failed to YDROLOGY /etland Hydrology Indicato Primary Indicators (minimum 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 In Sparsely Vegetated Concave ield Observations:	display indicator ors: of one is requir nagery (B7) Surf. (B8)	red; check all red; check all Aq Aq Aq Ar Re Tru Ga Ga Ott	that apply) ater-Stained uatic Fauna ue Aquatic F drogen Sulfi idized Rhizo esence of R cent Iron Re in Muck Sur auge or Well her (Explain) I Leaves (a (B13) Plants (B1 ide Odor ospheres educed Ir eduction i rface (C7) I Data (D2 a in Rema	(B9) (C1) along Living ron (C4) in Plowed Sc) 9) rrks)	Roots (C	Hydric Soil Present? Secondary Indicators (mi Surface Soil Cract Drainage Patterns Dry-Season Wate Crayfish Burrows 3) Saturation Visible Stunted or Stresse Geomorphic Posit FAC-Neutral Test	Yes nimum of two ks (B6) s (B10) r Table (C2) (C8) on Aerial Imag ed Plants (D1) ion (D2) (D5)	No
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Application/Content Image and public policy Austin Zgler State: M Sampling Policy Agrication (Mission) Agrication (Mission) Agrication (Mission) Agrication (Mission) Agrication (Mission) Agrication (Mission) Agrication) Agrication (Mission) Agrication) Agrication (Mission) Agrication) Agrication (Mission) Agrication) Agrication) Agrication (Mission) Agrication) Agrication) Agrication (Mission) Agrication)	Project/Site:	Gretn	a Bottoms				City/Co	unty:		Sarpy Cou	nty	Sampling I	Date:	4/28/20)15	
Investigator: Ban Fisher Austin Zigler Sector, Townalp, Rang S.4 112N R 10E Landform (fillislope, terrate, stc.): None Local Relief (concare, convex, none): Convex Solid Rel Vit Nam: Globon loarny fine sand, overwach, occasionally flooted MVM Classification: NAD 1983 Solid Rel Vit Nam: Globon loarny fine sand, overwach, occasionally flooted MVM Classification: NAD 1983 Are obgention	Applicant/Owner	r: L	yman-Riche	y Corporation						State	: NE	Sampling	Point:	Ag-03		
Landom (hillslop, terrace, etc.): Non Local Relief (concave, convex, none): Convex Stope (N): 0 Lat: 41.1223136173378 Long: 06.3074690811428 Datum: NAD 1018 Stope (N): 0 Lat: 41.1223136173378 Long: 06.3074690811428 Datum: NAD 1018 Are Vagetation , Soil Hydrology , significantly disturbed? Are 'Normal Circumstances' prevent? Yes X No SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrophytic Vagetation Present? Yes No X Hydrophytic Vagetation Present? Yes No X Is the Sampled Area within a Vietnand? Yes No X Figure phytic Vagetation Present? Yes No X No X No X Vecison Present? Yes No X Is the Sampled Area within a Vietnand? Yes No X Figure phytic Vagetation Present? Yes No X Is the Sampled Area within a Vietnand? Yes No X Figure phytic Vagetation Present? Yes No	Investigators:	Ben	Fisher		Aus	tin Ziglei	r			Section, To	wnship, Range	S 4	T 13N	R	10E	
Stop(%): 0 Lat: 41.1226136175370 Long: -96.3074690819428 Datum: NAD 1983 Soil Map Unit Name:	Landform (hillslo	ope, ter	race, etc.):	None						Local Re	lief (concave, c	onvex, non	e): C	onvex		
Soll Map Unit Name: Gibbon loamy tine sand, overwash, occasionally flooded MWI Classification: None Are dimatic hydrologic conditions on the site typical for the time of year? Yes X no. X no. No. Are Vogetation , Soll Hydrology , instantily problematic? (If needed, explain any answers in Remarks). SUMMARY OF FINISORS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrology No. X Hydrology Yes No. X Is the Sampled Area within a Wetland? Yes No. X Hydrology Yes No. X Is the Sampled Area within a Wetland? Yes No. X Hydrology Yes No. X Is the Sampled Area within a Wetland? Yes No. X Wetland Hydrology Yes No. X Is the Sampled Area within a Wetland? Yes No. X Wetland Hydrology Yes No. X Is the Sampled Area within a Wetland? Yes No. X Wetland Hydrology Yes No. X Is the Sampled Area within a Wetland? Yes No. X <td>Slope(%): 0</td> <td></td> <td>Lat:</td> <td>41.1226136</td> <td>175376</td> <td>i</td> <td>Long:</td> <td>-96.</td> <td>3074690</td> <td>819426</td> <td>Datum:</td> <td>NAD 1983</td> <td></td> <td></td> <td></td> <td></td>	Slope(%): 0		Lat:	41.1226136	175376	i	Long:	-96.	3074690	819426	Datum:	NAD 1983				
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If No, explain in Remarks) Are Vagetation Soil , Hydrology , significantly disturbed? Are 'Normali Circumstance' preventer? Yes X No (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No X Ves No N No X Ves No	Soil Map Unit Na	ame:	Gibbon lo	amy fine sand	, overw	ash, occ	asionally fl	loodec	ł		NWI Classifica	ation: Nor	ne			
Are Vegetation	Are climatic / hy	drologi	c conditions	on the site typ	ical for	this time	of year?	Ye	es X	No	(If No, exp	lain in Rem	arks)			
Are Vegetation	Are Vegetation		, Soil,	Hydrology	, si	gnificant	ly disturbe	d?		Are "Normal	Circumstances	s" present?	Yes	з X	No	
SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrophylic Vegetation Present? Yes No X Wetland Hydrology Present? Yes No X Remark: The area characterized by this data form is an upland area in an an explorutural field. The area failed to display indicators of hydrophylic vegetation, hydric soits, and wetland hydrology. Agricultural crops had not been planted as of the date of the field visit. Dominant functions, transects. Dominant functions, transects. VEGETATION- Use scientific names of plants. Absolute Dominant functions, transects. Dominant functions, transects. Strub Stratum Plot size: 6.Ft.) Total Number of Dominant Species ACW, or FAC: 0 (A) Thest are OBL, FACW, or FAC: 0 (A) Total Number of Dominant Species ACW, or FAC: 0.0% (A) Thest area the observation in an exploration is a constant. 20 Y FACU Percent of Dominant Species ACW, or FAC: 0.0% (A) Thest area the observation in an exploration is a special strutum 20 Y FACU Prevalence Index Worksheet: Number of Dominant Species ACW, or FAC: 0.0% (A) The stratum 20 Y FACU	Are Vegetation		, Soil,	Hydrology _	, na	aturally p	oroblematic	?		(If needed,	explain any an	swers in R	emark	3.)		
Hydrophytic Vegetation Present? Yes No X Hydrophytic Vegetation Present? Yes No X Wettand Hydrology Present? Yes No X Remarks: The area characterized by this data form is an uphand area in an agricultural field. The area failed to display indicators of hydrophytic vegetation, hydric soils, and wetland hydrology, Agricultural crops had not been planted as of the date of the field visit. Dominance Test Worksheet: VEGETATION – Use scientific names of plants: Absolute Dominant Indicator Shub Stratum Shub Stratum Plot size: 6 Ft) That Are OBL, FACW, or FAC: 0 Lemman amplexicaule 20 Y FACU Percent of Dominant Species 0.0% (A)B Vine Stratum 10 Y UPL Percent of Dominant Species 0.0% (A)B Vine Stratum 232 =Total Cover FACU Prevalence Index Worksheet: Total Number of Dominant Species 0.0% (A)B Yine Stratum 32 =Total Cover Multiply by: Column Totals: 32 0 FACU species 20 X = 0 FACU species 22 X = 0 FACU species 22 X = 0 </td <td>SUMMARY</td> <td>OF F</td> <td></td> <td>- Attach a</td> <td>site m</td> <td>an sh</td> <td>owina s</td> <td>amp</td> <td>lina po</td> <td>int locatio</td> <td>ons, transec</td> <td>cts. impo</td> <td>ortant</td> <td>featu</td> <td>res. ef</td> <td>C.</td>	SUMMARY	OF F		- Attach a	site m	an sh	owina s	amp	lina po	int locatio	ons, transec	cts. impo	ortant	featu	res. ef	C.
Hydric Soll Present? Yes No X Remarks: The area chracterized by this data form is an upland area in an agricultural field. The area failed to display indicators of hydrophytic vegetation, hydric solt, and wetland hydrology. Agricultural crops had not been planted as of the date of the field visit. Dominance Test Worksheet: VEGETATION – Use scientific names of plants. Abaolute X. Gavar Dominant Yes Dominant Species That Are OBL, FACW, or FAC: 0 (A) Heart. Stratum (Plot size: 6 Ft) Total Number of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B) Vine Stratum 10 Y UPL Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B) Vine Stratum 10 Y UPL Total % Cover of: 0.0% (A/B) Vine Stratum 32 "Total Scoles 0 x1 = 0 Vine Stratum 10 Y UPL Total % Cover of: 0.0% (A/B) Vine Stratum 20 Y FACU Pervalence Index Worksheet: Total % Cover of: 0.0% (A/B) Vine Stratum 10 Y UPL Total % Cover of: 0.0% (A/B) 0 Vine Stratum 10 Y UPL	Hydrophytic Ve	egetatio	on Present?	Yes	No	X	<u>eg e</u>				<u>, , , , , , , , , , , , , , , , , , , </u>	<u>, , , , , , , , , , , , , , , , , , , </u>	<u> </u>	loara	,	
Wettand Hydrology Present? No X Remarks: No X Remarks: The area characterized by this data form is an upland area in an agricultural field. The area failed to display indicators of hydrophytic vegetation, hydric sols, and wetland hydrology. Agricultural crops had not been planted as of the date of the field visit. VEGETATION_ Use scientific names of plants. Absolute Status Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FACC: 0 (A) Herb Stratum Plot size: 6 FL) Total Number of Dominant Species That Are OBL, FACW, or FACC: 0.0% (A) Descuratini incana 2 N UPL Percent of Dominant Species Area OBL, FACW, or FACC: 0.0% (A) Vine Stratum 2 N UPL Provalence Index Worksheet: Total Number of Dominant Species 0 0.0% (A) Vine Stratum 2 N UPL Percent Index Worksheet: Total % Cover of: Multiply by: Vine Stratum 2 N UPL Endustry 2.32 Vine Stratum 2 N UPL Endustry Vine Stratum 2.0 X 4 8.0	Hydric Soil Pre	esent?		Yes	No	Х	Is the	Samp	pled Area	а						
Remarks:	Wetland Hydro	ology P	resent?	Yes	No	Х	withir	n a vve	etiano ?		Yes	No	X	_		
The area characterized by this data form is an uplond area in an agricultural field. The area failed to display indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. Agricultural crops had not been planted as of the date of the field vist. VEGETATION Use scientific names of plants. Absolute Dominant Indicator Strutu Strutu Absolute Dominant Indicator Number of Dominant Species The stratum Strutu (Plot size: 6 FL) Thatapi arvense 20 Y FACU Descuratia in cara 10 Y UPL Species Across all Strata: 2 (B) Descuratia in cara 20 Y FACU Percent of Dominant Species 0.0% (A/B) Vine Stratum 10 Y UPL Total Number of Dominant Species 0.0% (A/B) Vine Stratum 23 =Total Cover FACU Percent of Dominant Species 0.2% 1.0% Y = 0 Vine Stratum 32 =Total Cover 0 X = 0 FACU species 2.2 X = 0 FACU species 2.2 X = 0 FACU species 1.2 X 5 = 60 0 X 1 = 0 FACU species 1.2 X 5 = 60 0 UP (B) Species 1.2	Remarks:															
soils, and wetland hydrology. Agricultural crops had not been planted as of the date of the field visit. VEGETATION Use scientific names of plants. Absolute Dominant Indicator Shub Stratum Shub Stratum Number of Dominant Species 0 (A) Thespiarvense 20 Y FACU FACU Total Number of Dominant Species 0.0% (A) Descurains incana 20 Y FACU Prevalence Index Worksheet: 0.0% (A) Jamiun amplexicaule 20 Y FACU Prevalence Index Worksheet: 0.0% (A) Vine Stratum 20 Y FACU Prevalence Index Worksheet: 0.0% (A) Vine Stratum 32 =Total Cover Prevalence Index Worksheet: Multiply by: 0 Vine Stratum 32 =Total Cover Total % Cover of: Multiply by: 0 FAC Species 0 x 2 = 0 FAC Species 20 x 4 = 80 140 (B) Prevalence Index Status 0 FAC Species 12 x 5 = 60 Column Totals: 32 (A) 140 (B) Prevalence Index	The area chara	acterize	d by this data	a form is an up	bland a	ea in an	agricultura	al field	I. The are	a failed to dis	splay indicators	s of hydroph	iytic ve	getatior	, hydric	
VEGETATION – Use scientific names of plants. Absolute % Cover Dominant Succiss Indicator Status Tree Stratum Stratus Stratum (Plot size: <u>6 Ft</u>) Thaspi arense (Plot size: <u>6 Ft</u>) (A) Descurainta incana 2 N UPL Percent of Dominant Species That Are OBL, FACW, or FAC:	soils, and wetla	and hyd	rology. Agric	ultural crops h	nad not	been pla	anted as of	the da	ate of the	e field visit.						
VEGETATION- Use scientific names of plants. Absolute 32.00 vr 20.00																
Tree Stratum Shrub Stratum Herb Stratum (Plot size: <u>6 Ft</u>) Descuratina incana Lamium amplexicaule 20 Y 21 N 22 N 232 =Total Cover Vine Stratum (Plot size: <u>6 Ft</u>) 10 Y 22 N 232 =Total Cover Vine Stratum 0 Vine Stratum 0 Vine Stratum 0 Vine Stratum 0 9 Percent of Dominant Species 0 x1 = 0 FACU Species 0 2 N 2 N 2 N 2 N 2 0 4 0 2 0 2 0 2 0 4 3 2 0 5 60 2 0 7 2 8 4	VEGETATIO	כא – ו	Jse scienti	ific names o	of plar	nts.	Absolute % Cover	<u>) Do</u> r S	ominant Species	Indicator Status	Dominance	Test Work	shoot			
Strub Stratum (Plot size: 6.Ft) (A) Thisspi arvense 20 Y FACU Descurainia incana 2 N UPL amium amplexicaule 2 N UPL 32 = Total Cover Total Number of Dominant Species 0.0% (A) Vina Stratum 32 = Total Cover Percent of Dominant Species 0.0% (A) Vina Stratum 32 = Total Cover Prevalence Index Worksheet:	Tree Stratum	<u>1</u>						-			Number of I	Dominant S	pecies	•		
Import contains Herb Stratum (Plot size: <u>6 Ft</u>) Descurainia incana 20 Y FACU Up 2 N UPL 32 =Total Cover Percent of Dominant Species Across all Strata: 2 (A/B) Vine Stratum 32 =Total Cover Prevalence Index Worksheet: 0.0% (A/B) Vine Stratum 32 =Total Cover Multiply by: 0.0% (A/B) Vine Stratum 32 =Total Cover FACU species 0 x1 = 0 FACU species 0 x2 = 0 FACU species 0 x2 = 0 FACU species 12 x5 = 60 Column Totals: 32 (A) 140 (B) Prevalence Index = B/A= 4.38 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test > 50% Prevalence Index s 3.0 Morphytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present? Yes No X Problematic (Include photo numbers here or on a separate she	Shrub Stratu	m									That Are OF	BL, FACW,	or FAC):	0	(A)
Initial incana 20 Y FACU Descuratinia incana 20 Y FACU 10 Y UPL 32 N UPL 32 =Total Cover Percent of Dominant Species 0.0% (A/B) Vine Stratum 32 =Total Cover Prevalence Index Worksheet: Total % Cover of: Multiply by: 0BL species 0 x1 = 0 Vine Stratum 32 =Total Cover Prevalence Index Worksheet: Total % Cover of: Multiply by: 0BL species 0 x1 = 0 FACU species 0 x3 = 0 FACU species 10 x4 = 80 UPL species 12 x5 = 60 Column Totals: 32 (A) 140 (B) Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Rearks or on a separate sheet)	Herb Stratum	n		о. С Г +	`						Total Numbe	er of Domin	ant			
Image of the securating incana 10 Y UPL 10 Y UPL Percent of Dominant Species 0.0% (A/B) 2 N UPL Percent of Dominant Species 0.0% (A/B) 32 =Total Cover IP UPL Percent of Dominant Species 0.0% (A/B) Vine Stratum 32 =Total Cover IP	Thlaspi a	 arvense	(PIOL SIZ)	e. <u>ori</u>	_)		20	h	Y	FACU	Species Acr	oss all Stra	ta:		2	(B)
Lamium amplexicaule 2 N UPL Percent of Dominant Species 0.0% (A/B) 32 =Total Cover Total % Cover of: Multiply by: OBL species 0 ×1 = 0 FACW species 0 ×2 = 0 FACW species 0 ×3 = 0 FACW species 0 ×4 = 80 UPL species 12 ×5 = 60 Column Totals: 32 (A) 140 (B) Prevalence Index = B/A= 4.38 4.38 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test > 50% Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Yes No X	Descura	inia inca	ina)	Y	UPL						_
32 =Total Cover Yine Stratum Total % Cover of: Multiply by: OBL species 0 x1 = 0 FACW species 0 x2 = 0 FAC species 0 x3 = 0 FACU species 20 x4 = 80 UPL species 12 x5 = 60 Column Totals: 32 (A) 140 (B) Prevalence Index = B/A= 4.38 4.38 4.38 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test > 50% Prevalence Index = 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation or problematic. Hydrophytic Vegetation Present? Yes No X	Lamium	amplexi	caule				2		Ν	UPL	 Percent of L That Are OE 	BL, FACW,	becies or FAC	:	0.0%	(A/B)
Vine Stratum							32	2=1	Total Cove	er	Burneloure	I				
India % Cover bit: Multiply by: OBL species 0 x1 = 0 FACW species 0 x2 = 0 FAC species 0 x3 = 0 FAC species 20 x4 = 80 UPL species 12 x5 = 60 Column Totals: 32 (A) 140 (B) Prevalence Index = B/A= 4.38 4.38 4.38 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test > 50% Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation (Explain) Remarks: (Include photo numbers here or on a separate sheet.) The area is dominated by unland weesthion X	Vine Stratum	<u>1</u>									Prevalence		ksnee	t:		
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FACW species 0 x3 = 0 FAC species 0 x3 = 0 FAC species 20 x4 = 80 UPL species 12 x5 = 60 Column Totals: 32 (A) 140 (B) Prevalence Index = B/A= 4.38 4.38 4.38 Hydrophytic Vegetation Indicators:												s	0	_ x 2 =	0	
FAC species												les	0	- x 3 =	0	
PACO species												s	20	x 4 =	80	
OPL species													12	x5=	60	
Column Totals: 32(A) 140(B) Prevalence Index = B/A= 4.38 Hydrophytic Vegetation Indicators:											UPL species	5		_ (A)	4.40	
Prevalence Index = B/A= 4.38 Hydrophytic Vegetation Indicators:											Column Tota	als:	32	_(A)	140	(D)
Hydrophytic Vegetation Indicators:											Preva	lence Index	: = B/A	=	4.38	
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											Rapid T	est for Hyd	rophyti	c Veget	ation	
											Domina	nce Test >	50%			
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Beta in Remarks of on a separate sheet)											Morpho	logical Ada	otation	s (Prov	ide supp	oorting
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Yegetation Present? Yes No X											Problem	Remarks or natic Hvdror	on a s ohvtic '	leparate Veqetati	on (Ex	plain)
Hydrophytic Vegetation Present? Yes No X Remarks: (Include photo numbers here or on a separate sheet.) The area is dominated by upland vegetation											Indicators of be present,	of hydric soi unless dist	I and v urbed	vetland I or probl	nydrolog ematic.	jy must
Remarks: (Include photo numbers here or on a separate sheet.)											Hydrop Vegetation	hytic Present?	Yes		No	x
The area is connected by unlatin veneration	Remarks: (Inclu	ude pho	to numbers	here or on a s	eparate	sheet.)									<u> </u>	



Profile Description: (Describe to the depth	needed to document	the indi	cator or confirm t	he absence of Indicators.)	
Depth Matrix	R	edox Fea	atures		
(inches) Color (moist) %	Color (moist)	%	Type ¹ Loc ²	Texture	Remarks
0 to 10 10YR 2/1 100				SILT LOAM	
10 to 18 10YR 5/2 100				COARSE SAND	
18 to 26 10YR 2/1 90				SILT LOAM	Mixed Matrix
18 to 26 10YR 5/2 10				COARSE SAND	Mixed Matrix
¹ Type: C=Concentration, D=Depletion, RM=R	educed Martix, CS=Cc	overed or	Coated Sand Grai	ns. ² Location: PL=Pore Lini	ing, M=Matrix.
Hydric Soil Indicators:	Sandy Gleyed Ma	ıtrix (S4)		Indicators for Problematio	e Hydric Soils: ³
Histic Epipedon (A2)	Sandy Redox (S5)		Iron-Manganese Masses (I	F12)
Black Histic (A3)	Stripped Matrix (S	6)		Dark Surface (S7)	
Hydrogen Sulfide (A4)	Loamy Mucky Mir	neral (F1)			(TE12)
Stratified Layers (A5)	Loamy Gleyed Ma	atrix (F2)			(F 2)
2 cm Muck (A10)	Depleted Matrix (F3)		Other (Explain in Remarks))
Depleted Below Dark Surface (A11)	Redox Dark Surfa	ace (F6)			
Thick Dark Surface (A12)	Depleted Dark Su	Irface (F7)		2	
Sandy Mucky Mineral (S1)	Redox Depression	ns (F8)		Indicators of hydrophytic ve wetland hydrology must be n	egetation and
5 cm Mucky Peat or Peat (S3)				disturbed or probler	matic.
Restrictive Layer (if observed):					
Туре:					
Depth (inches):				Hydric Soil Present?	Yes <u>No X</u>
Remarks:					
The observed soil profile failed to display indicators	s of hydric soll.				
HYDROLOGY					
HYDROLOGY Wetland Hydrology Indicators:	ad: check all that applying			Secondary Indicators (r	ninimum of two required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is require	ed; check all that apply	·)		Secondary Indicators (r	ninimum of two required)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2)	ed; check all that apply) d Leaves (B9)	Secondary Indicators (r	ninimum of two required) acks (B6)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Seturation (A2)	ed; check all that apply) d Leaves (a (B13) Plants (B1	B9)	Secondary Indicators (r	ninimum of two required) acks (B6) ns (B10) ter Table (C2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marker (P1)	ed; check all that apply U Water-Stained Aquatic Fauna True Aquatic F) d Leaves (a (B13) Plants (B1	B9) 4)	Secondary Indicators (r Surface Soil Cra Drainage Patter Dry-Season Wa	ninimum of two required) acks (B6) ns (B10) ter Table (C2)
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is require Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ed; check all that apply Uter-Stained Aquatic Fauna True Aquatic F Hydrogen Sult) d Leaves (a (B13) Plants (B1 fide Odor	B9) 4) (C1) along Living Roots (C	Secondary Indicators (r Surface Soil Cra Drainage Patter Dry-Season Wa Crayfish Burrow Saturation Visib	ninimum of two required) acks (B6) ns (B10) ter Table (C2) rs (C8) le on Aerial Imag (C9)
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Project/Site: Gretna Bottoms		City/Count	ty:	Sarpy Coun	ity S	Sampling Date:	4/28/2	2015	
Applicant/Owner: Lyman-Richey Corpo	oration			State	NE	Sampling Point	: Ag-0	4	
Investigators: Ben Fisher	Austin Zigler		:	Section, Tow	vnship, Range	S 9 T 13	N R	10E	
Landform (hillslope, terrace, etc.):	Depression			Local Reli	ief (concave, co	nvex, none):	Concave	;	
Slope(%): 0 Lat: 41.11	64207116002	Long: -	-96.305504052	21251	Datum:	NAD 1983			
Soil Map Unit Name: Gibbon loamy fin	e sand, overwash, occa	asionally floo	oded		NWI Classificat	ion: None			
Are climatic / hydrologic conditions on the	site typical for this time	of year?	Yes X	No	(If No, expla	ain in Remarks))		
Are Vegetation, Soil, Hydrol	ogy, significantl	y disturbed?	A	Are "Normal (Circumstances"	present? Y	əs X	No	
Are Vegetation, Soil, Hydrol	ogy, naturally p	roblematic?		(If needed,	explain any ans	wers in Remar	ks.)		
SUMMARY OF FINDINGS - Atta	ch a site man sho	owing sar	nnling noi	nt locatio	ns transect	s importar)t feati	ires et	ic.
Hydrophytic Vegetation Present? Yes	s X No	<u>oming our</u>					<u>it ioutt</u>	<u></u>	
Hydric Soil Present? Ye	s X No	Is the S	ampled Area						
Wetland Hydrology Present? Ye	s X No	within a	wetland?		Yes X	KNo			
Remarks:									
The area characterized by this data form i wetland hydrology. Agricultural crops had	s a wetland area in an not been planted as of	agricultural f the date of t	ield. The area he field visit.	displayed in	dicators of hydi	ophytic vegeta	tion, hyd	ric soils, a	and
VEGETATION Use scientific na	mes of plants.	Absolute	Dominant	Indicator					
Tree Stratum			<u>opecies</u>	<u>Status</u>	Dominance	Test Workshee	et:		
					That Are OB	ominant Specie	ys ∖C: _	1	(A)
Shrub Stratum									
Herb Stratum (Plot size: <u>6 F</u>	t)				Total Number Species Acro	r of Dominant		2	(B)
Bidens vulgata			- <u>Y</u>	FACW			-		_ (D)
Stellaria media			Y	FACU	Percent of Do	ominant Specie	s	50.0%	(A/B)
Digitaria sanguinalis		5	<u>N</u>	FACU	That Are OBL	, FACW, or FA	.C:		_` ′
		75	=Total Cover		Prevalence I	ndex Workshe	et:		
Vine Stratum					Total % 0	Cover of:	Mul	tiply by:	
<u> </u>					OBL species	0	x 1 =	= 0	
					FACW specie	es40	x 2 =	- 80	
					FAC species	0	x 3 =	= 0	
					FACU specie	es35	x 4 =	= 140	
					UPL species	0	x 5 =	= 0	
					Column Tota	ls [.] 75	(A)	220	(B)
					Prevale	ence Index = B/	Ά=	2.93	
					Lhudnenhudie V	Venetetien Ind			
						vegetation ind	icators:	totion	
							nic vege	lation	
						ce lest > 50%			
						ce index ≤ 3.0	(5		
					data in R	emarks or on a etic Hydrophytic	ns (Prov separate Vegeta	vide supp e sheet) tion (Ex	orting
					Indicators of	hydric soil and	wetland		nv muet
					be present,	unless disturbe	d or prob	plematic.	,, 11031
					Hydroph Vegetation P	ytic resent? Ye	s X	Νο	
Remarks: (Include photo numbers here or	on a separate sheet.)								

The area is dominated by hydrophytic vegetation and displays approximately 25% bare ground.



Profile Descrip	otion: (Descr	ibe to the	depth nee	ded to doo	cumen	t the indic	cator or	confirm t	he absence of Indicators.)	
Depth		Matrix			F	Redox Fea	itures			
(inches)	Color (moist)	%	Color (n	noist)	%	Type 1	Loc ²	Texture	Remarks
0 to 18	10YR	2/1	90	7.5YR	4/6	10	С	М	SILTY CLAY LOAM	
¹ Type: C=Conc	entration, D=	Depletion,	RM=Reduc	ced Martix,	CS=C	overed or	Coated	Sand Grai	ns. ² Location: PL=Pore Lin	ing, M=Matrix.
Hydric Soil In	dicators:								Indicators for Problemati	c Hydric Soils: ³
Histosol (A1)				Sandy G	leyed M	atrix (S4)			Coast Prairie Redox (A16)	
Histic Epiped	lon (A2)			Sandy R	edox (S	5)			Iron-Manganese Masses (F12)
Black Histic ((A3)			Stripped	Matrix (S6)			Dark Surface (S7)	
Hydrogen Su	Ilfide (A4)			Loamy M	lucky Mi	ineral (F1)				
Stratified Lay	vers (A5)			Loamy G	leyed M	latrix (F2)			Very Shallow Dark Surface	e (TF12)
2 cm Muck (#	A10)			Depleted	Matrix ((F3)			└── Other (Explain in Remarks)	5)
Depleted Bel	ow Dark Surfa	ce (A11)		Redox D	ark Surf	ace (F6)				
Thick Dark S	urface (A12)		Γ	Depleted	Dark S	urface (F7)				
Sandy Mucky	Mineral (S1)		Γ	Redox D	epressio	ons (F8)			³ Indicators of hydrophytic ve	egetation and
5 cm Mucky	Peat or Peat (§	33)	L			(, , ,			wetland hydrology must be p disturbed or proble	present, unless matic.
	e Laver (if	observer	4)-							
	e Layer (ii	UDSEI VEL	<i></i>							
Depth (inche	s):								Hydric Soil Present?	Yes X No
Remarks:										
The observed so	il profile meets	hydric soil o	criteria.							
HYDROLOGY	7									
Wetland Hydr	ology Indica	ators:								
Primary Indicat	tors (minimur	n of one is	required; c	heck all the	at apply	y)			Secondary Indicators (r	minimum of two required)
Surface Wate	er (A1)			Wate	r-Staine	d Leaves (I	B9)		Surface Soil Cra	acks (B6)
High Water T	Table (A2)			Aqua	tic Faun	a (B13)			Drainage Patter	rns (B10)
Saturation (A	.3)			True	Aquatic	Plants (B14	4)		Dry-Season Wa	ater Table (C2)
U Water Marks	(B1)			Hydro	ogen Su	lfide Odor (C1)		Crayfish Burrow	vs (C8)
Sediment De	posits (B2)			Oxidi	zed Rhiz	zospheres a	along Livii	ng Roots (C	C3) Saturation Visib	le on Aerial Imag.(C9)
Drift Deposits	s (B3)			Prese	ence of I	Reduced Iro	on (C4)		Stunted or Stree	ssed Plants (D1)
Algal Mat or	Crust (B4)			Rece	nt Iron F	Reduction ir	Plowed	Soils (C6)	Geomorphic Po	sition (D2)
Iron Deposits	s (B5)			L Thin	Muck S	urface (C7)			✓ FAC-Neutral Te	est (D5)
Inundation Vi	isible on Aerial	Imagery (B7	7)	Gaug	e or We	ell Data (D9)			
Sparsely Veg	getated Concav	/e Surf. (B8)		Other	r (Explai	in in Remar	ks)			
Field Observat	<u>tions:</u>									
Surface Water	Present?	Yes	No	<u>X</u>	Depth	(inches):				
Water Table Pr	resent?	Yes	No) <u>X</u>	Depth	(inches):			Wotland Hydrology Procor	12 Vac V Na
Saturation Pres	sent?	Yes	No	<u>X</u>	Depth	(inches):			Wettand Hydrology Preser	
Describe Recorde	ed Data (stream	n gauge, mo	nitoring well,	aerial photo	os, previ	ous inspec	tions), if a	vailable:		
Remarks:										
The area display	ed indicators o	of wetland hy	drology.							

Project/Site:	Gretna I	Bottoms				City/Cour	nty:	Sarpy Cour	nty	Sampling Da	ate: 4	ł/28/20)15	
Applicant/Owner:	: Lyr	man-Richey	/ Corporat	ion				State	: NE	Sampling Po	oint:	Ag-05		
Investigators:	Ben Fi	isher		Au	stin Zigle	r		Section, To	wnship, Range	S9 T	13N	R	10E	
Landform (hillslop	pe, terra	ce, etc.):	De	pression				Local Re	lief (concave, c	onvex, none)	: Cor	ncave		
Slope(%): 0		Lat:	41.1151	83257856	4	Long:	-96.3053635	5134579	Datum:	NAD 1983				
Soil Map Unit Na	me:	Gibbon loa	amy fine sa	and, overv	/ash, occ	asionally flo	oded		NWI Classifica	ation: None	l.			
Are climatic / hyd	drologic o	conditions c	on the site	typical for	this time	of year?	Yes X	No	(If No, exp	lain in Remar	rks)			
Are Vegetation	, §	Soil,	Hydrology	/, s	ignifican	tly disturbed	?	Are "Normal	Circumstances	" present?	Yes	х	No	
Are Vegetation	, s	Soil,	Hydrology	/, n	aturally p	problematic?		(If needed,	explain any an	swers in Ren	narks.))		
SUMMARY		IDINGS -	Attach	a site r	nan sh	owing sa	mpling pc	oint locatio	ons transec	ts import	í tant f	eatu	res et	c
Hydrophytic Ve	getation	Present?	Yes	X No		owing su	inping pe			no, import		cata	100, 01	0.
Hydric Soil Pres	sent?		Yes	No	X	Is the S	Sampled Are	a						
Wetland Hydrol	logy Pres	sent?	Yes	X No		within	a wetland?		Yes	No	X	-		
Remarks:														
The area charac	cterized I	by this data	form is a	n upland a	rea in ar	agricultural	field. The are	ea displayed i	ndicators of hyd	drophytic veg	etatior	i and v	vetland	
hydrology; howe	ever, the	area failed	to meet h	ydric soll (criteria. A	gricultural ci	rops had not	been planted	as of the date (of the field vis	sit.			
						AL L. / -	Deminent	In Product						
VEGETATIO	N_ Us	se scienti	fic name	es of pla	nts.	<u>Absolute</u> % Cover	Dominant Species	Indicator Status	Dominance	Test Works	heet:			
Tree Stratum									Number of [Dominant Spe	ecies			
Shrub Stratur	n								That Are OF	BL, FACW, or	FAC:		1	(A)
Herb Stratum		(Plot size	. 6 Et	N					Total Numbe	er of Dominar	nt			
Bidens vu	ulgata	(FIOL 3120	. <u> </u>	/		40	Y	FACW	Species Acr	oss all Strata	<i>.</i> :		1	(B)
						40	=Total Cove	er	Boroont of D	ominant Sna				
Vine Stratum	_								That Are OB	SL, FACW, or	FAC:		100.0%	(A/B)
									Provalanca	Indax Works	shoot:			
									Total %	Cover of:	sneet.	N Au I +i	nly by:	
											0	x 1 =	0 0	
									FACW species	ies 4	-0	x 2 =	80	
									FAC species	<u> </u>	5	x 3 =	0	
									FACLL spec	, <u> </u>	3	x 4 =	0	
										2 C	3	x 5 =	0	
										, <u> </u>	40	(A) –	80	(B)
									Column Tota	ais:			0.00	
									Preva	ence index =	: B/A=		2.00	
									Hydrophytic	Vegetation I	Indica	tors:		
									X Rapid T	est for Hydro	phytic	Vegeta	ation	
									X Domina	nce Test > 50)%			
									X Prevale	nce Index ≤ 3	3.0			
									Morphol	logical Adapta	ations	(Provi	ide supp	orting
									Problem	atic Hydroph	iytic Ve	egetati	on (Exp	olain)
									Indicators of be present,	of hydric soil a unless distur	and we	tland h r probl	nydrolog ematic.	y must
									Hydropl Vegetation	nytic Present?	Yes	х	No	
Remarks: (Inclue	de photo	numbers h	nere or on	a separat	e sheet.)								·	
The area display	yed dom	inant hydro	phytic veg	etation ar	d displa	ed approxin	nately 60% ba	are ground.						



Profile Descri	iption: (Des	cribe to the	depth nee	eded to document	the indi	cator or con	firm the	e absence of Indicators.)	
Depth		Matrix		R	edox Fea	atures			
(inches)	Color	(moist)	%	Color (moist)	%	Type ¹ Lo	oc 2	Texture	Remarks
1 to 8	10YR	4/2	100				5	SAND	
8 to 18	10YR	5/2	100				5	SAND	
18 to 26	10YR	4/1	100					SAND	
¹ Type: C=Con	centration, D	=Depletion,	RM=Redu	ced Martix, CS=Co	vered or	Coated Sand	d Grains	 ²Location: PL=Pore Linir 	ng, M=Matrix.
Hydric Soil I	ndicators:		-					Indicators for Problematic	Hydric Soils: ³
Histosol (A	1)			Sandy Gleyed Ma	trix (S4)			Coast Prairie Redox (A16)	
Histic Epipe	edon (A2)			Sandy Redox (S5)			Iron-Manganese Masses (F	12)
Black Histic	c (A3)			Stripped Matrix (S	6)				,
Hydrogen S	Sulfide (A4)		[Loamy Mucky Mir	eral (F1)				
Stratified La	avers (A5)		Γ	Loamy Gleved Ma	atrix (F2)			Very Shallow Dark Surface	(TF12)
2 cm Muck	(A10)		- -	Depleted Matrix (I	=3)			Other (Explain in Remarks)	
	elow Dark Sur	face (A11)	Г		0) 00 (E6)				
	Surface (A12)		L						
	Surface (ATZ)	`	L	Depieted Dark Su	nace (F7))		³ Indicators of hydrophytic ve	getation and
Sandy Muc	ky Mineral (S1)	L	Redox Depression	ns (F8)			wetland hydrology must be pr disturbed or problem	esent, unless
			4).						
	ive Layer (u).						
Type:	· · · ·							Hydric Soil Present?	Yes No X
Deptil (Inch	les).								
HYDROLOG Wetland Hyd	Y Irology Indi	cators:							
Primary Indica	ators (minim	um of one is	required; o	check all that apply)			Secondary Indicators (m	inimum of two required)
Surface Wa	ater (A1)			Water-Stained	Leaves ((B9)		Surface Soil Crae	cks (B6)
High Water	Table (A2)			Aquatic Fauna	ı (B13)			Drainage Pattern	is (B10)
Saturation ((A3)			True Aquatic F	Plants (B1	4)		Dry-Season Wat	er Table (C2)
Water Mark	(B1)			Hydrogen Sulf	ide Odor ((C1)		Crayfish Burrows	; (C8)
Sediment D	Deposits (B2)			Oxidized Rhiz	ospheres	along Living Ro	oots (C3)	Saturation Visible	on Aerial Imag.(C9)
Drift Depos	its (B3)			Presence of R	educed Ir	on (C4)		Stunted or Stress	sed Plants (D1)
Algal Mat o	r Crust (B4)			Recent Iron R	eduction ir	n Plowed Soils	(C6)	Geomorphic Pos	ition (D2)
Iron Deposi	its (B5)			☐ Thin Muck Su	rface (C7))		✓ FAC-Neutral Tes	t (D5)
Inundation	Visible on Aer egetated Conc	ial Imagery (B ave Surf. (B8)	7))	Gauge or Wel	l Data (D9 i in Remai	9) rks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	No	D X Depth	(inches):				
Water Table I	Present?	Yes	X No	Depth	inches):	18			
Saturation Pr	esent?	Yes	X No	Depth	(inches):	10		Wetland Hydrology Present	.? Yes <u>X</u> No
Describe Record	ded Data (stre	am gauge, mo	onitoring well	, aerial photos, previc	ous inspec	ctions), if availa	ble:		
Remarks: The area displa	ayed indicators	s of wetland h	ydrology.						

Project/Site:	Gretna Botton	ns		City/Coun	ty:		Sarpy Coun	ity	Sam	npling Date:	4/28/20)15	
Applicant/Owner	r: Lyman-F	Richey Corporation					State	: NE	Sar	npling Point:	Ag-06		
Investigators:	Ben Fisher		Austin Zigler				Section, Tov	vnship, Ran	nge S	9 T 13N	R	10E	
Landform (hillslo	ope, terrace, et	c.): Depres	sion				Local Rel	ief (concave	e, conve	ex, none): C	oncave		
Slope(%): 0		Lat: 41.11381126	2968	Long:	-96.3046	61005	16217	Datum	n: NAI	D 1983			
Soil Map Unit Na	ame: Gibbo	on loamy fine sand,	overwash, occ	asionally floo	oded			NWI Classi	ification	None			
Are climatic / hyd	drologic conditi	ons on the site typic	al for this time	of year?	Yes	Х	No	(If No, e	explain i	n Remarks)			
Are Vegetation	, Soil	, Hydrology	, significant	ly disturbed?)	ļ	Are "Normal	Circumstan	ces" pre	esent? Yes	X	No	
Are Vegetation	, Soil	, Hydrology	, naturally p	roblematic?			(If needed,	explain any	answe	rs in Remarks	s.)		
SUMMARY		GS - Attach a s	ite map she	owing sar	mpling	i og i	nt locatio	ns. trans	sects.	important	featu	res. et	c.
Hydrophytic Ve	egetation Prese	ent? Yes X	No										-
Hydric Soil Pre	esent?	Yes X	No	Is the S within a	ampled Wetlan	Area		Vaa	v	No			
Wetland Hydro	ology Present?	Yes X	No	within t	Trettan			res _	X		_		
Remarks:													
The area chara	cterized by this	data form is a wetla	and area in an	agricultural f	field. Th	e area	a displayed ii	ndicators of	f hydrop	hytic vegetati	on, hydr	ic soils,	and
wetiand hydroid	ogy. Agricultura	li crops nad not beel	n planted as of	the date of	the field	VISIT.							
				Absolute	Domin	ant	Indicator						
VEGETATIC	DN – Use sc	ientific names of	f plants.	<u>% Cover</u>	Spec	ies	Status	Dominar	nce Tes	t Worksheet	:		
Tree Stratum	<u>1</u>							Number	of Domi	inant Species			(
Shrub Stratu	<u>m</u>							That Are	OBL, F	ACW, or FAC):	1	(A)
Herb Stratum	<u>n</u> (Plo	t size: 6 Ft)					Total Nur	mber of	Dominant			
Equisetu	im hyemale		,	100	١	(FACW	Species /	Across a	all Strata:	_	1	(B)
				100	=Total	Cover		Percent of	of Domir	nant Species		400.00/	
Vine Stratum	<u>1 </u>							That Are	OBL, F	ACW, or FAC	: —	100.0%	(A/B)
								Prevalen	nce Inde	x Workshee	t:		
								Total	l % Cov	er of:	Multi	ply by:	
								OBL spe	cies	0	x 1 =	0	
								FACW sp	oecies	100	x 2 =	200	
								FAC spe	cies	0	x 3 =	0	
								FACU s	pecies	0	x 4 =	0	
								UPL spe	cies	0	x 5 =	0	
								Column T	Totals:	100	(A)	200	(B)
								Pre	evalence	e Index = B/A	=	2.00	
								Hydrophy	tic Voo	otation India	ators		
									d Toot f	or Hydrophyti	alors.	ation	
									inance .	Toet > 50%	5 vegeu	ation	
									alence l	ndex < 3.0			
								Morr	hologic	al Adaptation	s (Prov	ide sunn	ortina
								data	in Rem	arks or on a s	eparate	sheet)	orang
								Prob	lematic	Hydrophytic V	/egetati	on (Exp	olain)
								Indicator be prese	rs of hyd ent, unle	dric soil and v ess disturbed	etland f or probl	nydrolog ematic.	y must
								Hydr Vegetatio	ophytic on Pres	ent? Yes	x	No	
Remarks: (Inclu The area displa	ude photo numl ayed dominant	pers here or on a se hydrophytic vegetati	parate sheet.) on.					1					



Profile Desc	ription: (Des	cribe to the Matrix	depth ne	eded to do	ocument R	the indi	cator or	confirm	the absence of Indicators.)	
(inches)	Color	(moist)	%	Color (moist)	%	Type 1	Loc ²	Texture	Remarks
0 to 8	10YR	3/2	95	7.5YF	2 4/6	5	<u> </u>	м	SAND	
8 to 15	10YR	4/2	100						SAND	
15 to 18	10YR	2/1	100						SILTY CLAY LOAM	
18 to 22	10YR	4/2	100						SAND	
22 to 26	10YR	2/1	100						SILTY CLAY LOAM	
¹ Type: C=Co	ncentration, D	=Depletion,	RM=Redu	uced Martix	, CS=Co	overed or	Coated	Sand Gra	ains. ² Location: PL=Pore Linin	g, M=Matrix.
Hydric Soil	Indicators:								Indicators for Problematic	Hvdric Soils: ³
Histosol (A	\ 1)			Sandy (Gleyed Ma	atrix (S4)				<u></u>
Histic Epip	bedon (A2)			Sandy I	Redox (S5	5)				10)
Black Hist	ic (A3)				d Matrix (S	, 56)				12)
	Sulfide (A4)				Mucky Mii	neral (F1)			Dark Surface (S7)	
Stratified I	avers (A5)				Gleved M	atrix (F2)			Very Shallow Dark Surface (TF12)
	(A10)				d Matrix (E3)			Uther (Explain in Remarks)	
	Rolow Dark Sur	faco (A11)				1 3) 200 (ΓC)				
					d Dark Su	urface (F7)			³ Indicators of hydrophytic yea	etation and
Sandy Mu	CKY Mineral (S1)		Redox I	Depressio	ns (F8)			wetland hydrology must be pre	esent, unless
	ky Peal of Peal	(53)								
	tive Layer (if observe	d):							
Туре:									Hvdric Soil Present?	Yes X No
Depth (inc	hes):									···· ···
HYDROLOG										
Wetland Hy	drology Indi	icators:	roquirod	chock all t	hat apply	λ			Socondary Indicators (mi	nimum of two required)
			required,			/) 				
Uigh Wate	ater (A1)				er-Staine	d Leaves (B9)			KS (B6)
						a (DIS) Diante (B1	4)			r Table (C2)
	(A3)					fide Odor /	4) (C1)			(C8)
	NS (DT)				lized Rhiz	nue Ouor (along Livir	na Roots (i	C3) Saturation Visible	on Aerial Imag.(C9)
	sits (B3)				sence of F	Reduced In	on (C4)	ig 10003 (1	Stunted or Stress	ed Plants (D1)
Algal Mat	or Crust (B4)				ent Iron R	eduction i	n Plowed S	Soils (C6)	Geomorphic Positi	ion (D2)
Iron Depos	sits (B5)			Thir	n Muck Su	urface (C7))		✓ FAC-Neutral Test	(D5)
Inundation	Visible on Aer	ial Imagery (B	57)	🗌 Gau	lge or We	II Data (D9	9)			
Sparsely \	egetated Conc	ave Surf. (B8)	Oth	er (Explaii	n in Rema	rks)			
Field Observ	vations:									
Surface Wat	ter Present?	Yes	Ν	lo <u>X</u>	Depth	(inches):				
									-	
Water Table	Present?	Yes	N	lo <u>X</u>	Depth	(inches):			-	

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

Remarks:

The area displayed indicators of wetland hydrology.

Project/Site: Gretna Bottoms	City/County:	Sarpy Cour	nty	Sampling Date:	4/28/201	5	
Applicant/Owner: Lyman-Richey Corporation		State	: NE	Sampling Point:	Ag-07		
Investigators: Ben Fisher Austin Zigle	r	Section, Tov	wnship, Range	S 9 T 13N	R 10	E	
Landform (hillslope, terrace, etc.): Depression		Local Re	lief (concave, co	onvex, none): Co	ncave		
Slope(%): 0 Lat: 41.1130186220679	Long: -96.3043335	5792732	Datum:	NAD 1983			
Soil Map Unit Name: Gibbon loamy fine sand, overwash, occ	asionally flooded		NWI Classifica	tion: None			
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes X	No	(If No, expl	ain in Remarks)			
Are Vegetation, Soil, Hydrology, significant	ly disturbed?	Are "Normal	Circumstances	" present? Yes	Х	No	
Are Vegetation, Soil, Hydrology, naturally p	problematic?	(If needed,	explain any ans	swers in Remarks.)		
SUMMARY OF FINDINGS - Attach a site map sh	owing sampling po	oint locatio	ons, transec	ts, important	feature	s, etc	с.
Hydrophytic Vegetation Present? Yes X No			•				
Hydric Soil Present? Yes X No	Is the Sampled Are within a Wetland?	a	Ves	X No			
Wetland Hydrology Present? Yes X No					-		
Remarks:							
The area characterized by this data form is a wetland area in an wetland hydrology criteria. Agricultural crops had not been plant	agricultural field. The are ed as of the date of the fi	ea displayed ir eld visit.	ndicators of hyd	rophytic vegetatio	ו, hydric נ	soils, a	Ind
VEGETATION Use scientific names of plants.	Absolute Dominant	Indicator Status	Dominance	Test Worksheet:			
Tree Stratum			Number of C	Dominant Species			
Shruh Stratum			That Are OB	BL, FACW, or FAC		2	(A)
Herb Stratum (Plot size) (Et			Total Numbe	er of Dominant			
Bidens vulgata	10 Y	FACW	Species Acro	oss all Strata:		2	(B)
Eleocharis palustris	10 Y	OBL	- -				_
	20 =Total Cov	er	That Are OB	ominant Species L, FACW, or FAC:	10	0.0%	(A/B)
vine Stratum_			Prevalence	Index Worksheet	:		
			Total %	Cover of:	Multipl	y by:	
			OBL species	10	x 1 =	10	
			FACW speci	es <u>10</u>	x 2 =	20	
			FAC species	. 0	x 3 =	0	
			FACU speci	es 0	x 4 =	0	
			UPL species	0	x 5 =	0	
			Column Tota	als: 20	(A)	30	(B)
			Preval	ence Index = B/A=	: 1	.50	
			Hydrophytic	Vegetation Indica	ators:		
			X Rapid Te	est for Hvdrophytic	Vegetati	on	
			X Dominar	nce Test > 50%	0		
			X Prevaler	nce Index ≤ 3.0			
			Morphole	ogical Adaptations	(Provide	e supp	ortina
			data in F	Remarks or on a se atic Hvdrophytic V	parate sl	heet) (Exp	olain)
			Indicators of	f hydric soil and w	etland hv	droloa	v must
			be present,	unless disturbed o	r problen	natic.	,
			Hydroph Vegetation F	nytic Present? Yes	ХN	o	
Remarks: (Include photo numbers here or on a separate sheet.)			l.				

The area displayed dominant hydrophytic vegetation and displayed approximately 80% bare ground.



Profile Descri	iption: (Des	cribe to the Matrix	depth nee	eded to doc	ument the ind Redox Fe	icator or o	confirm	the absence of Indicators.)	
Depth (inches)	Color	(moist)	%	Color (m	oist) %	Type 1	Loc ²	Texture	Remarks
0 to 10	10YR	3/2	100					SAND	
10 to 22	10YR	5/1	95	7.5YR 4	/6 5	С	М	SANDY LOAM	
¹ Type: C=Con	centration, D	=Depletion,	RM=Redu	ced Martix,	CS=Covered o	r Coated S	Sand Gra	ains. ² Location: PL=Pore Lining, I	√l=Matrix.
Hydric Soil I	ndicators:							Indicators for Problematic Hy	dric Soils: ³
Histosol (A	1)		[Sandy Gle	eyed Matrix (S4)			Coast Prairie Redox (A16)	
Histic Epipe	edon (A2)		[Sandy Re	dox (S5)			☐ Iron-Manganese Masses (F12)	
Black Histic	: (A3)		[Stripped N	/atrix (S6)				
Hydrogen S	Sulfide (A4)		[Loamy Mu	icky Mineral (F1)	1			(0)
Stratified La	ayers (A5)		[Loamy Gl	eyed Matrix (F2)				. 2)
2 cm Muck	(A10)		·	Depleted	Matrix (F3)			Other (Explain in Remarks)	
Depleted B	elow Dark Sur	face (A11)	[Redox Da	rk Surface (F6)				
Thick Dark	Surface (A12)		[Depleted	Dark Surface (F7	7)			
Sandy Muc	ky Mineral (S1)	Γ	Redox De	pressions (F8)			³ Indicators of hydrophytic vegeta	tion and
5 cm Mucky	y Peat or Peat	(S3)						disturbed or problematic	it, unless
Restricti	ve Layer (if observe	d):						
Туре:								Hydric Soil Prosent?	as X No
Depth (inch	ies):								
HYDROLOG	Y								
Wetland Hyd	Irology Ind	icators:	and the state of the		1				
Primary Indica	ators (minim	um of one is	requirea; a			(5.2)			ium of two required)
Surface Wa	ater (A1)			Water	-Stained Leaves	(B9)		Surface Soil Cracks (B6)
High Water					c Fauna (B13) quatic Plants (B	14)		Drainage Falleris (B	10) able (C2)
Water Mark	(A3) (s (B1)				ren Sulfide Odor	(C1)			3)
	enosits (R2)				ed Rhizospheres	along Livir	a Roots ((C3) Saturation Visible on	Aerial Imag.(C9)
Drift Depos	its (B3)			Preser	nce of Reduced I	ron (C4)	.g(Stunted or Stressed	Plants (D1)
Algal Mat o	r Crust (B4)			Recen	t Iron Reduction	in Plowed S	Soils (C6)	Geomorphic Position	(D2)
Iron Deposi	its (B5)			🗌 Thin N	luck Surface (C7	7)		FAC-Neutral Test (D	5)
Inundation	Visible on Aer	ial Imagery (B	7)	Gauge	e or Well Data (D	9)			
Sparsely Ve	egetated Conc	ave Surf. (B8)	Other	(Explain in Rema	arks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	No	D <u>X</u>	Depth (inches):			-	
Water Table	Present?	Yes	No	D <u>X</u>	Depth (inches):			Wetland Hydrology Present?	Ves X No
Saturation Pr	esent?	Yes	No	<u> </u>	Deptn (Inches):				
Describe Record	aed Data (stre	am gauge, mo	onitoring well	, aerial photos	s, previous inspe	ctions), if a	vailable:		
Remarks:	aved indicator	of wetland b	vdrology						
ine area uispia			yarology.						

Project/Site: Gretna Bottoms	City/Cour	ity:	Sarpy Coun	ty S	Sampling Date:	4/28/2015	
Applicant/Owner: Lyman-Richey Corporation			State:	NE	Sampling Point:	Ag-08	
Investigators: Ben Fisher	Austin Zigler		Section, Tow	nship, Range	S 9 T 13N	R 10E	
Landform (hillslope, terrace, etc.): Depres	sion		Local Reli	ef (concave, co	onvex, none): Co	ncave	
Slope(%): 0 Lat: 41.11235916	97791 Long:	-96.303092840	06751	Datum:	NAD 1983		
Soil Map Unit Name:Gibbon loamy fine sand,	overwash, occasionally floo	oded		NWI Classificat	ion: None		
Are climatic / hydrologic conditions on the site typic	al for this time of year?	Yes X	No	(If No, expla	ain in Remarks)		
Are Vegetation, Soil, Hydrology	_, significantly disturbed?	? A	re "Normal (Circumstances"	present? Yes	X No	
Are Vegetation, Soil, Hydrology	, naturally problematic?		(If needed, e	explain any ans	wers in Remarks.	.)	
SUMMARY OF FINDINGS - Attach a s	te map showing sa	mpling poir	nt locatio	ns, transect	ts, important	features, et	tc.
Hydrophytic Vegetation Present? Yes X	No			•	•		
Hydric Soil Present? Yes X	No Is the S	ampled Area Wetland?		Vac V	No		
Wetland Hydrology Present? Yes X	No					_	
Remarks:							
The area characterized by this data form is a wetla wetland hydrology. Agricultural crops had not been	and area in an agricultural n planted as of the date of	field. The area the field visit.	displayed in	dicators of hydi	ophytic vegetation	ז, hydric soils,	and
VEGETATION_ Use scientific names of	plants. <u>Absolute</u> <u>% Cover</u>	Dominant Species	Indicator Status	Dominance -	Test Worksheet:		
Tree Stratum				Number of D	ominant Species		
Shrub Stratum				That Are OB	L, FACW, or FAC	. 1	(A)
Herb Stratum (Plot size: 6 Et)			Total Number	r of Dominant		
Bidens vulgata) 30	Y	FACW	Species Acro	ss all Strata:	1	(B)
Eleocharis palustris	5	N	OBL	Demonst of D	ania ant Caracia a		
	35	=Total Cover		That Are OBL	, FACW, or FAC:	100.0%	6(A/B)
Vine Stratum				Prevalence I	ndex Worksheet		
				Total % (Cover of:	Multiply by:	
				OBL species	5	x 1 = 5	
				FACW specie	es <u>30</u>	x 2 = 60	
				FAC species	0	x 3 = 0	
				FACU specie	es 0	x 4 = 0	
				UPL species	0	x 5 = 0	
				Column Total	s: 35	(A) 65	(B)
				Prevale	ence Index = B/A=	: 1.86	
				Hydrophytic	Vegetation Indica	ators:	
				X Rapid Te	st for Hydrophytic	Vegetation	
				X Dominan	ce Test > 50%	0	
				X Prevalen	ce Index ≤ 3.0		
				Morpholo	ogical Adaptations	(Provide supr	oortina
				data in R Problema	emarks or on a se atic Hydrophytic V	egetation (Ex	plain)
				Indicators of be present,	hydric soil and we unless disturbed o	etland hydrolog or problematic.	gy must
				Hydroph Vegetation P	ytic resent? Yes	X No	
Remarks: (Include photo numbers here or on a se	parate sheet.)						

The area displayed dominant hydrophytic vegetation and displayed approximately 65% bare ground.



Profile Descr	iption: (Des	cribe to the	e depth ne	eded to doc	ument	the indi	cator or o	confirm	the absence of Ind	licators.)	
Depth		Matrix			R	edox Fea	atures				
(inches)	Color	(moist)	%	Color (m	ioist)	%	Type 1	Loc ²	Texture		Remarks
0 to 4	10YR	3/2	100						SILTY SAND		
4 to 6	10YR	2/1	98	7.5YR 4	4/6	2	С	М	SILTY CLAY LOAM	1	
6 to 16	10YR	3/2	98	7.5YR 4	4/6	2	С	М	SAND		
16 to 18	10YR	2/1	98	7.5YR 4	4/6	2	С	М	SILTY CLAY LOAM	1	
¹ Type: C=Cor	centration, D	=Depletion	, RM=Redu	uced Martix,	CS=Co	vered or	Coated S	Sand Gra	iins. ² Location	n: PL=Pore Lining, N	1=Matrix.
Hydric Soil I	indicators:								Indicators fo	r Problematic Hyd	lric Soils: ³
Histosol (A	1)			Sandy Gl	eyed Ma	trix (S4)			Coast Pra	irie Redox (A16)	
Histic Epip	edon (A2)			Sandy Re	edox (S5)			Iron-Mano	anese Masses (F12)	
Black Histie	c (A3)			Stripped I	Matrix (S	6)				(°, °, °, °, °, °, °, °, °, °, °, °, °, °	
Hydrogen S	Sulfide (A4)			Loamy M	ucky Mir	neral (F1)				ace (37)	
Stratified L	avers (A5)			Loamv G	eved Ma	atrix (F2)			Very Shall	low Dark Surface (TF1	2)
2 cm Muck	(A10)				Matrix (I	=3)			Other (Exp	plain in Remarks)	
	lolow Dork Sur	face (A11)				о) (ГС)					
	Surface (A12)				Dark Su	rface (F7))		³ Indicators	of hydrophytic vegetati	on and
Sandy Muc	cky Mineral (S1)		Redox De	epressio	ns (F8)			wetland hyd	rology must be presen	t, unless
5 cm Muck	y Peat or Peat	(S3)							dis	turbed or problematic.	
□ Restrict	ive Layer (i	f observe	ed):								
Туре:									Hydric Soil Pre	sent? Ye	s X No
Depth (incl	nes):										
HYDROLOG Wetland Hyo	Y Irology Indi	cators:									
Primary Indic	ators (minim	um of one i	s required;	check all tha	at apply)			Seconda	ry Indicators (minim	um of two required)
Surface Wa	ater (A1)			Water	r-Stained	d Leaves (B9)			Surface Soil Cracks (I	36)
High Water	r Table (A2)			Aquat	ic Fauna	a (B13)				Drainage Patterns (B	10)
Saturation	(A3)			True A	Aquatic F	Plants (B1	4)			Dry-Season Water Ta	ble (C2)
Water Mark	ks (B1)			Hydro	gen Sulf	ide Odor	(C1)			Crayfish Burrows (C8)	
Sediment D	Deposits (B2)			Oxidiz	ed Rhiz	ospheres	along Livin	g Roots (0	C3)	Saturation Visible on	Aerial Imag.(C9)
Drift Depos	sits (B3)			Prese	nce of R	educed Ir	on (C4)			Stunted or Stressed F	Plants (D1)
Algal Mat c	or Crust (B4)			Recer	nt Iron R	eduction i	n Plowed S	Soils (C6)		Geomorphic Position	(D2)
Iron Depos	its (B5)			Thin I	Muck Su	rface (C7))		\checkmark	FAC-Neutral Test (D5)
	Visible on Aeri	al Imagery (I	37)	Gaug	e or Wel	Data (D	9)				
Sparsely V	egetated Conc	ave Surf. (B8	3)	U Other	(Explain	in Rema	rks)				
Field Observ	rations:										
Surface Wate	er Present?	Yes	s N	lo <u>X</u>	Depth	(inches):			-		
Water Table	Present?	Yes	s N	lo <u>X</u>	Depth	(inches):		0	Watland Lud	rology Present?	Vas X Na
Saturation Pi	resent?	Yes	s <u>X</u> N	lo	Depth	(inches):		6		rology Fresent?	
Describe Record	ded Data (strea	am gauge, m	onitoring we	ll, aerial photo	s, previc	ous inspec	tions), if av	/ailable:			
Domento											
The area displa	aved indicators	of wetland h	nydroloav.								
	,		,								

Project/Site: Gretna Bottoms	City/County:	Sarpy Cour	nty	Sampling Date:	4/28/2015	
Applicant/Owner: Lyman-Richey Corporation		State	: NE	Sampling Point:	Ag-09	
Investigators: Ben Fisher Au	stin Zigler	Section, Tov	wnship, Range	S 9 T 13N	R 10E	
Landform (hillslope, terrace, etc.): None		Local Rel	lief (concave, co	onvex, none): No	one	
Slope(%): 0 Lat: 41.113424081776	1 Long: -96.3022014	807705	Datum:	NAD 1983		
Soil Map Unit Name: Gibbon loamy fine sand, overv	vash, occasionally flooded		NWI Classificat	tion: None		
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes X	No	(If No, expla	ain in Remarks)		
Are Vegetation, Soil, Hydrology, s	significantly disturbed?	Are "Normal	Circumstances"	present? Yes	X No	
Are Vegetation, Soil, Hydrology, r	naturally problematic?	(If needed,	explain any ans	swers in Remarks	s.)	
SUMMARY OF FINDINGS - Attach a site r	nap showing sampling po	oint locatio	ons. transect	ts. important	features, e	tc.
Hydrophytic Vegetation Present? Yes X No	<u></u>			<u></u> ,	<u></u>	
Hydric Soil Present? Yes No	X Is the Sampled Are	а	X			
Wetland Hydrology Present? Yes No	X Within a Wedalid !		Yes	NOX	_	
Remarks:						
The area characterized by this data form is an upland a	area located in an agricultural field.	The area faile	ed to display inc	dicators of hydric	soil and wetlan	d
hydrology; however, the area met hydrophytic vegetatio	on criteria. Agricultural crops had n	ot been plante	ed as of the date	e of the field visit.		
	_					
VEGETATION Use scientific names of pla	nts. <u>Absolute</u> <u>Dominant</u> <u>% Cover</u> <u>Species</u>	Status	Dominance -	Test Worksheet		
Tree Stratum			Number of D	ominant Species		
Shrub Stratum			That Are OB	L, FACW, or FAC	;:1	(A)
Herb Stratum (Plot size: 6 Et)			Total Numbe	r of Dominant		
Equisetum hyemale	100 Y	FACW	Species Acro	oss all Strata:	1	(B)
	100 =Total Cove		Dereent of D	minant Crasica		
Vine Stratum			That Are OBL	L, FACW, or FAC	: 100.0%	, (A/B)
			Dravalanca	nday Markahaa		
					Multiply by:	
				0	x 1 = 0	
				100	x 2 = 200	
			EAC species	0	x 3 = 0	
			EACLL species	0	x 4 = 0	
				0	x 5 = 0	
				. 100	(A) 200	(B)
			Column Total	ls:	_(A)	(D)
			Prevale	ence Index = B/A=	= 2.00	
			Hydrophytic	Vegetation Indic	ators:	
			X Rapid Te	est for Hydrophytic	c Vegetation	
			X Dominan	ice Test > 50%		
			X Prevalen	ce Index ≤ 3.0		
			Morpholo	ogical Adaptations	s (Provide sup	porting
			Problema	atic Hydrophytic \	/egetation (Ex	(plain)
			Indicators of be present,	hydric soil and w unless disturbed	etland hydrolog or problematic.	gy must
			Hydroph Vegetation P	ytic Present? Yes	X No	
Remarks: (Include photo numbers here or on a separat	e sheet.)		1			<u> </u>
me area displayed dominant hydrophytic vegetation.						



SOIL

Profile Descri	ption: (Des	cribe to the	depth nee	eded to document	the ind	icator or	confirm t	he absence of Indic	ators.)		
Depth		Matrix		R	edox Fe	atures					
(inches)	Color	(moist)	%	Color (moist)	%	Type 1	Loc ²	Texture		Remar	ks
0 to 8	10YR	5/3	100					SAND			
8 to 20	10YR	3/2	95	7.5YR 4/6	5	С	М	SILTY SAND			
20 to 26	10YR	2/1	98	7.5YR 4/6	2	С	М	SILTY CLAY LOAM			
¹ Type: C=Cond	centration, D	=Depletion,	RM=Redu	ced Martix, CS=Co	vered o	r Coated	Sand Grai	ns. ² Location: I	PL=Pore Lining,	M=Matrix.	
Hydric Soil In	ndicators:							Indicators for 1	Problematic Hy	dric Soils:	3
Histosol (A1	1)		[Sandy Gleyed Ma	trix (S4)			Coast Prairie	Redox (A16)		
Histic Epipe	edon (A2)		[Sandy Redox (S5)				ese Masses (F12)		
Black Histic	: (A3)		[Stripped Matrix (S	6)				(07)		
Hydrogen S	Sulfide (A4)		[Loamy Mucky Mir	neral (F1)				e (S7)		
Stratified La	avers (A5)		[Loamy Gleved Ma	atrix (F2)			Very Shallow	Dark Surface (TF	12)	
	(Δ10)		ſ		=2)			Other (Expla	in in Remarks)		
	olow Dark Sur	faco (A11)	L		з) жар (ГС)						
			L			•					
	Surface (A12)		L	Depleted Dark Su	rface (F7	()		³ Indicators of	hydrophytic vegeta	tion and	
Sandy Much	ky Mineral (S1)	l	Redox Depression	ns (F8)			wetland hydrol	ogy must be prese	nt, unless	
	Peat or Peat	(53)								•	
	ve Layer (it observe	d):								
Type:):							Hydric Soil Prese	ent? Ye	es l	No X
Depth (Inch	es):										
HYDROLOG Wetland Hyd	Y rology Indi	icators:									
Primary Indica	ators (minim	um of one is	required;	check all that apply)			Secondary	Indicators (minin	num of two re	equired)
Surface Wa	ter (A1)			Water-Stained	Leaves	(B9)		SI SI	urface Soil Cracks	(B6)	
High Water	Table (A2)			Aquatic Fauna	a (B13)				rainage Patterns (B	10)	
Saturation (A3)			True Aquatic F	Plants (B	14)		Di	ry-Season Water Ta	able (C2)	
U Water Mark	s (B1)			Hydrogen Sulf	ide Odor	(C1)			rayfish Burrows (C8	3)	
Sediment D	eposits (B2)			Oxidized Rhiz	ospheres	along Livir	ig Roots (C	3) 🗌 Sa	aturation Visible on	Aerial Imag.(C	C9)
Drift Deposi	its (B3)			Presence of R	educed I	ron (C4)		St	unted or Stressed	Plants (D1)	
Algal Mat or	r Crust (B4)			Recent Iron R	eduction	in Plowed S	Soils (C6)	G	eomorphic Position	(D2)	
Iron Deposi	ts (B5)			L Thin Muck Su	rface (C7	7)		✓ F/	AC-Neutral Test (D	5)	
Inundation \	Visible on Aer	ial Imagery (B	7)	Gauge or Wel	l Data (D	9)					
Sparsely Ve	egetated Conc	ave Surf. (B8		Other (Explain	n in Rema	arks)					
Field Observa	ations:										
Surface Wate	r Present?	Yes	No	o X Depth	(inches):						
Water Table F	Present?	Yes	No	o X Depth	(inches):			Mation of Liveling		Vee	
Saturation Pre	esent?	Yes	<u>X</u> No	o Depth	(inches):		16	wetland Hydro	logy Present?	res	NO X
Describe Record	led Data (stre	am gauge, mo	nitoring well	I, aerial photos, previc	ous inspe	ctions), if a	vailable:				
The area failed	to meet wetla	nd hydrology	criteria.								

Project/Site:	Gretna Bottoms			City/Coun	ty:	Sarpy Cour	nty	Sampling I	Date:	4/28/20)15	
Applicant/Owner	r: Lyman-Riche	ey Corporation				State	: NE	Sampling	Point:	Ag-10		
Investigators:	Ben Fisher	A	ustin Zigler			Section, Tov	wnship, Range	S 9	T 13N	R	10E	
Landform (hillslo	ope, terrace, etc.):	None				Local Re	lief (concave, c	onvex, non	e): N	one		
Slope(%): 0	Lat	: 41.11059673141	13	Lona:	-96.30261712	36534	Datum:	NAD 1983	·			
Soil Map Unit Na	ame: Gibbon lo	amy fine sand ove	rwash occa	sionally flor	oded		NWI Classifica	tion: Nor	1e			
Are climatic / by		on the site typical f	or this time	of year?		No	(If No evol	lain in Rem	arks)			
Are Vegetation	Soil	Hydrology	significantly	v disturbed?		Are "Normal	(II NO, CAPI	" present?	Voc	· v	No	
Are Vegetation	, Soli	, Hydrology,	significanti			Ale Nollia	Circumstances	present	165	~	_ 110 _	
Are vegetation	, Soli	, нуагоюду <u>,</u> ,	naturally pr	oblematic?		(If needed,	explain any an	swers in R	emarks	;.)		
SUMMARY	OF FINDINGS	- Attach a site	map sho	wing sa	npling poi	nt locatio	ons, transec	ts, impo	rtant	featu	res, et	с.
Hydrophytic Ve	egetation Present?	Yes X N	0	la tha S	omplad Aroo							
Hydric Soil Pre	esent?	Yes N	0 <u>X</u>	within a	Wetland?		Yes	No	x			
Wetland Hydro	ology Present?	Yes N	o X				103		~	_		
Remarks:												
The area chara however, the a	acterized by this da rea met hydrophytio	ta form is an upland c vegetation criteria.	area in an a Agricultura	agricultural I crops had	field. The are not been plar	a failed to di ited as of the	splay indicators a date of the fie	s of hydric s Id visit.	soil and	l wetlan	d hydrolo	ogy;
VEGETATIO	DN – Use scient	tific names of pl	ants.	Absolute <u>% Cover</u>	Dominant Species	Indicator Status	Dominance	Test Work	csheet			
Tree Stratum	<u>1</u>						Number of E That Are OE	Dominant S BL, FACW,	pecies or FAC):	2	(A)
Shrub Stratu	<u>Im</u>											
Herb Stratun	<u>n</u> (Plot siz	ze: <u>6 Ft</u>)					Total Number	er of Domin	ant ita:		2	(B)
Equisetu	ım hyemale			60	Y	FACW				_		_(D)
Helianth	us annuus 			10	N	FACU	Percent of D	ominant Sp	pecies		100.0%	(A/B)
Phalaris	arundinacea			10	N	FACW	That Are OB	L, FACW,	or FAC	:	100.070	_(,,,,,,)
Galiuma				5	N	FACU	Prevalence	Index Wor	kshee	t:		
- Bumex o	crispus			5	N	FAC	Total %	Cover of		Multi	nly hy	
Cornus o	drummondii			2	Y	FAC			0	$\frac{1}{x 1} =$	0	
				102	-Total Cover			·	80	_ x 2 =	160	
Vine Stratum	ı							es	7	_ ··	21	
<u>vino otratan</u>	<u></u>						FAC species	S	15	_ × 4 _		
							FACU spec	ies	0	_ ^ 4 =	0	
							UPL species		0	_ x 5 =	0	
							Column Tota	als:	102	_(A)	241	<u>(</u> B)
							Preval	lence Index	(= <i>B</i> /A;	=	2.36	
							Hydrophytic	Vegetatio	n Indic	ators:		
							X Rapid T	est for Hvd	rophyti	c Veaet	ation	
							X Domina	nce Test >	50%	- 5-		
							Provolor		20			
									· 5.0	a (D		
							data in F	ogical Ada Remarks or	on a s	eparate	sheet)	oning
							Problem	atic Hydro	phytic \	/egetati	on (Exp	olain)
							Indicators o be present,	f hydric soi unless dis	l and w turbed	/etland l or probl	nydrolog ematic.	y must
							Hydroph Vegetation I	nytic Present?	Yes	х	No	
Remarks: (Inclu	ude photo numbers	here or on a separa	ate sheet.)				1					
The area displa	ayed dominant hydi	rophytic vegetation.										



Profile Descr	iption: (Des	cribe to the	depth nee	eded to document	the indi	cator or	confirm t	he absence of Indica	tors.)		
Depth		Matrix		R	edox Fea	atures					
(inches)	Color	r (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Rem	arks
0 to 10	10YR	4/2	100					SAND			
10 to 22	10YR	3/1	100					SILTY CLAY LOAM			
22 to 26	10YR	3/1	95	7.5YR 4/6	5	С	М	SILTY CLAY LOAM			
¹ Type: C=Con	centration, I	D=Depletion,	RM=Redu	ced Martix, CS=Co	overed or	Coated S	Sand Grai	ins. ² Location: P	L=Pore Lining, I	M=Matrix.	
Hydric Soil I	ndicators:							Indicators for P	roblematic Hy	dric Soils	3
Histosol (A	1)		[Sandy Gleyed Ma	atrix (S4)			Coost Proirio	Podox (A16)		-
Histic Epipe	edon (A2)		[Sandy Redox (St	5)				Redux (ATO)		
Black Histic	c (A3)		[Stripped Matrix (S6)						
Hydrogen S	Sulfide (A4)		[Loamy Mucky Mi	neral (F1)			Dark Surface	(\$7)		
Stratified L	avers (A5)		[Loamy Gleved M	atrix (F2)			Very Shallow	Dark Surface (TF	12)	
	(Δ10)		ſ	Doplotod Matrix (E2)			Other (Explain	n in Remarks)		
	lolow Dark Su	faco (A11)	L		то) год (ГС)						
		Iace (ATT)	L		ace (F6)						
	Surface (A12))	L	Depleted Dark St	urface (F7))		³ Indicators of h	vdrophytic vegeta	tion and	
5 cm Muck	ky Mineral (S⁴ v Peat or Peat	1) : (S3)	l	Redox Depressio	ns (F8)			wetland hydrolo disturb	gy must be presended or problematic	nt, unless	
	ive Layer (if observe	d):								
Туре:											
Depth (inch	nes):							Hydric Soil Prese	nt? Ye	es	No X
HYDROLOG Wetland Hyd	Y drology Ind	icators:	roquirodu					Casandaru	ndiaatara (minin	ours of two	required)
Primary Indic	ators (minim	um of one is	requirea; o		/)			Secondary	ndicators (minin	num of two	requirea)
Surface Wa	ater (A1)			Water-Staine	d Leaves ((B9)		Su	rface Soil Cracks	(B6)	
High Water	r Table (A2)			Aquatic Faun	a (B13)				ainage Patterns (B	(00)	
	(A3)				Plants (B1	4)			v-Season water 1		
	ks (B1)					(C1)	a Danta (C		turation Visible on) Aorial Imag	(CQ)
Drift Dopos	Deposits (B2)				Cospheres	along Livir	ig Rools (C	,3) <u> </u>	inted or Stressed	Plante (D1)	.(09)
	on Crust $(B4)$				Reduction i	n Plowed 9	Soils (C6)		omorphic Position		
	its (B5)				Inface (C7))	50113 (00)		C-Neutral Test (D	(DZ) 5)	
	Visible on Aer	ial Imagery (B	7)		Il Data (D) 9)				5)	
Sparsely V	egetated Cond	cave Surf. (B8)	Other (Explai	n in Rema	rks)					
Field Observ	ations:										
Surface Wate	er Present?	Yes	N	o <u>X</u> Depth	(inches):						
Water Table	Present?	Yes	N	o <u>X</u> Depth	(inches):						
Saturation Pr	resent?	Yes	N	o <u>X</u> Depth	(inches):			Wetland Hydrol	ogy Present?	Yes	NoX
Describe Record	ded Data (stre	am gauge, mo	onitoring well	l, aerial photos, previ	ous inspec	ctions), if a	vailable:				
The area failed	d to meet wetla	and hydrology	criteria.								

Project/Site: Gre	etna Bottoms			City/Coun	ity:	Sarpy Cour	nty	Sampling I	Date:	4/28/20)15	
Applicant/Owner:	Lyman-Riche	y Corporation				State	E NE	Sampling	Point:	Ag-11		
Investigators: B	Ben Fisher		Austin Zig	ler		Section, Tov	wnship, Range	S 9	T 13N	R	10E	
Landform (hillslope,	terrace, etc.):	None				Local Rel	lief (concave, c	onvex, non	e): No	one		
Slope(%): 0	Lat:	41.11059215	570562	Long:	-96.30149073	72212	Datum:	NAD 1983				
Soil Map Unit Name	: Gibbon loa	amy fine sand,	overwash, o	ccasionally floo	oded		NWI Classifica	tion: Nor	ıe			
Are climatic / hydrolo	ogic conditions	on the site typic	cal for this tir	ne of year?	Yes X	No	(If No, expl	lain in Rem	arks)			
Are Vegetation	, Soil,	Hydrology	, significa	ntly disturbed?	?	Are "Normal	Circumstances	present?	Yes	Х	No	
Are Vegetation	, Soil,	Hydrology	, naturally	problematic?		(If needed,	explain any an	swers in R	emarks	.)		
SUMMARY OF		- Attach a s	ite map s	howing sa	mpling poi	nt locatio	ons, transec	ts, impo	rtant	featu	res, et	c.
Hydrophytic Veget	ation Present?	Yes X	No									-
Hydric Soil Present? Yes No X				Is the S	Is the Sampled Area			Vac N Y				
Wetland Hydrology	Wetland Hydrology Present? Yes No X			within			Yes	NO	X	_		
Remarks:												
The area character the area met hydro	ized by this data phytic vegetatio	a form is an up n criteria. Agric	land agricultu cultural crops	ural area. The had not been	area failed to planted as of	display indic the date of th	ators of hydric he field visit.	soil and we	Iland h	ydrolog	y; howe	ver,
VEGETATION_	 Use scienti 	ific names o	f plants.	Absolute <u>% Cover</u>	Dominant Species	Indicator Status	Dominance	Test Work	sheet:			
Tree Stratum							Number of E	Dominant S	pecies		1	(4)
Shrub Stratum							That Are OE	BL, FACW,	or FAC	:	I	(A)
Herb Stratum	(Plot size	e: <u>6 Ft</u>)				Total Numbe	er of Domin	ant			
Equisetum hy	yemale			70	Y	FACW	Species Acro	oss all Stra	ta:	_	2	(B)
Thlaspi arver	nse			30	Y	FACU	Percent of D	ominant Sp	oecies		50.0%	(
Urtica dioica				5	N	FACW	That Are OB	L, FACW,	or FAC:		50.076	(A/D)
Vine Stretum				105	=Total Cover		Prevalence	Index Wor	ksheet			
vine Stratum							Total %	Cover of:		Multi	iply by:	
							OBL species	s	0	x 1 =	0	
							FACW speci	es	75	x 2 =	150	
							FAC species	S	0	x 3 =	0	
							FACU spec	ies	30	x 4 =	120	
							UPL species	s	0	x 5 =	0	
							Column Tota	als:	105	(A)	270	(B)
							Preval	lence Index	: = B/A=		2.57	
							Hydrophytic	Vegetatio	n Indic	ators		
							Rapid To	est for Hvd	rophytic	: Veget	ation	
							Domina	nce Test >	50%	, rogot		
							X Prevaler	nce Index <	30			
							Morphol	odical Ada	otations	(Prov	ide sunr	ortina
							data in F	Remarks or	on a se	eparate	sheet)	olcin)
							Problem	atic Hydrop		egetati	on (Exp	piain)
							Indicators o be present,	or nydric soi unless dist	and w urbed o	etiand h or probl	nydrolog ematic.	ly must
							Hydroph Vegetation I	nytic Present?	Yes	x	No	
Remarks: (Include	photo numbers	here or on a se	eparate shee	t.)								

The area displayed dominant hydrophytic vegetation.



Profile Descr	ription: (Desc	ribe to the	depth nee	ded to document	the indi	cator or confi	irm the	e absence of Indicators.)					
Depth	Depth Matrix Redox Features												
(inches) Color (moist) %			%	Color (moist) % Type 1 Loc 2			; ²	Texture	Remark	Remarks			
0 to 6	10YR	4/2	100					SAND					
6 to 14	10YR	5/2	100					SAND					
14 to 24	10YR	3/3	100					SILTY SANDY LOAM					
¹ Type: C=Cor	ncentration, D	=Depletion,	RM=Redu	ced Martix, CS=Co	vered or	Coated Sand	Grains	s. ⁴ Location: PL=Pore Lining, N	/I=Matrix.				
Hydric Soil I	Indicators:							Indicators for Problematic Hyd	dric Soils: ³				
Histosol (A1) Sandy Gleyed Matrix (S4)								Coast Prairie Redox (A16)					
Histic Epipedon (A2) Sandy Redox (S5)								☐ Iron-Manganese Masses (F12)					
Black Histic (A3)								Dark Surface (S7)					
Hydrogen Sulfide (A4)													
Stratified L	ayers (A5).			Loamy Gleyed Ma	atrix (F2)			└── Very Shallow Dark Surface (TF12)					
2 cm Muck	(A10)		Г	Depleted Matrix (F	-3)			└── Other (Explain in Remarks)					
Depleted E	Below Dark Surf	ace (A11)	Γ	Redox Dark Surfa	ce (F6)								
Thick Dark	Surface (A12)	,	Г	Depleted Dark Su	rface (F7))							
Sandy Mur	cky Mineral (S1)		Г)		³ Indicators of hydrophytic vegetat	ion and				
5 cm Muck	y Peat or Peat	S3)	L		15 (1 0)			wetland hydrology must be present, unless disturbed or problematic.					
Restrict	ive Layer (if	observed	d):										
Type:			-										
Depth (incl	hes):							Hydric Soil Present? Yes No X					
Remarks:													
HYDROLOG	GY												
Wetland Hy	drology India	ators:											
Primary Indic	ators (minimu	m of one is	required; c	check all that apply)			Secondary Indicators (minim	um of two re	quired)			
Surface W	ater (A1)			Water-Stained	Leaves ((B9)		Surface Soil Cracks (B6)					
High Wate	High Water Table (A2)				ı (B13)			Drainage Patterns (B10)					
Saturation	Saturation (A3)					4)		Dry-Season Water Table (C2) Cravifish Burrows (C2)					
Water Mar	U Water Marks (B1)						Crayfish Burrows (C8)						
Sediment I	Deposits (B2)				ospheres	along Living Roo	ots (C3)	J3) Saturation Visible on Aerial Imag.(C9)					
Drift Deposits (B3)						(CE)							
Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) This Must Curfus (07)							(00)	\checkmark Geomorphic Position (D2)					
Linn Deposits (B5))				
Sparsely Vegetated Concave Surf. (B8) Gauge of Well Data (D9) Other (Explain in Remarks)													
Field Observ	ations:												
Surface Wat	er Present?	Yes	No	Depth ((inches):								
Water Table Present? Yes No X Depth (inches):													
Saturation P	resent?	Yes	No	Depth ((inches):			Wetland Hydrology Present?	Yes	No <u>X</u>			
Describe Recor	ded Data (strea	m gauge, mo	nitoring well	, aerial photos, previc	ous inspec	ctions), if availab	le:						
Remarks:													
The area failed to meet wetland hydrology criteria.													
Project/Site:	Gretna Bottoms			City/Coun	ty:	Sarpy Coun	ty S	Sampling Date:	4/28/20	15			
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Applicant/Owner:	Lyman-Riche	y Corporation				State	NE	Sampling Point:	Ag-12				
Investigators:	Ben Fisher		Austin Zigle	r		Section, Tow	nship, Range	S 9 T 13N	R 1	0E			
Landform (hillslop	e, terrace, etc.):	None				Local Reli	ef (concave, co	nvex, none): Co	nvex				
Slope(%): 0	Lat:	41.110599188	33905	Long:	-96.29902936	47521	Datum: N	NAD 1983					
Soil Map Unit Nar	ne: Gibbon lo	amy fine sand, o	overwash, occ	asionally floc	oded		NWI Classificati	ion: None					
Are climatic / hydr	ologic conditions	on the site typic	al for this time	e of year?	Yes X	No	(If No, expla	in in Remarks)					
Are Vegetation	, Soil,	Hydrology	_, significant	tly disturbed?	· /	Are "Normal (Circumstances"	present? Yes	Х	No			
Are Vegetation	, Soil,	Hydrology	, naturally p	problematic?		(If needed.	explain anv ans	wers in Remarks.)				
SUMMARY C		- Attach a si	ite map sh	owing sar	nolina poi	nt locatio	ns. transect	s. important	, featur	es. et	c.		
Hydrophytic Veg	getation Present?	Yes	No X	•			,	-, p		<u>,</u>	<u>.</u>		
Hydric Soil Pres	ent?	Yes	No X	Is the S	ampled Area								
Wetland Hydrold	ogy Present?	Yes	No X	within a	wetiand?		Yes	NoX	_				
Remarks:													
VEGETATIO	wetland hydrology	i form is an upla criteria.	plants.	Absolute % Cover	Dominant	Indicator	The area failed t	o meet hydrophyr					
Tree Stratum				<u>/// COver</u>	opecies	<u>otatus</u>	Dominance I	est Worksheet:					
Ohrech Ohrechung							That Are OBL	_, FACW, or FAC	:	1	(A)		
Shrub Stratum							Tatal Name and						
Herb Stratum	(Plot size	e: <u>6 Ft</u>)	00	<i></i>	54.014	Species Acros	ss all Strata:		2	(B)		
Thiaspi an					- <u>Y</u>	FACV					_ `		
Bidens vul	gata			5	N	FACW	Percent of Do	minant Species		50.0%	(A/B)		
Carex brev	vior			5	Ν	FAC		., 1 AOW, 01 1 AO.					
Centaurea	macalusa			5	N	FACU	Prevalence li	ndex Worksheet	:				
Descurain	ia incana			5	Ν	UPL	Total % C	Cover of:	Multip	oly by:			
Galium ap	arine			5	N	FACU	OBL species	0	x 1 =	0			
				65	=Total Cover		FACW specie	es25	x 2 =	50			
Vine Stratum	-						FAC species	5	x 3 =	15			
							FACU specie	es <u>30</u>	x 4 =	120			
							UPL species	5	x 5 =	25			
							Column Total	s: <u>65</u>	(A)	210	<u>(</u> B)		
							Prevale	ence Index = B/A=	:	3.23			
							Hydrophytic \	/egetation Indica	ators:				
							Rapid Te	st for Hydrophytic	Vegeta	ation			
							 Dominan	ce Test > 50%	•				
							Prevalence	ce Index ≤ 3.0					
							Morpholo	gical Adaptations	(Provi	de supp	orting		
							data in Ro Problema	emarks or on a se atic Hydrophytic V	parate egetatic	sheet) on (Exp	plain)		
							Indicators of be present, u	hydric soil and we	etland h	ydrolog ematic.	y must		
							Hydrophy Vegetation P	ytic resent? Yes		No)	x		
Remarks: (Includ	le photo numbers	here or on a ser	parate sheet.)	vimatoly 40%	baro ground								

The area is dominated by upland vegetation and displays approximately 40% bare ground.



Depth Matr	x	F	Redox Fea	atures			
(inches) Color (moist) %	Color (moist)	%	Type 1	Loc ²	Texture	Remarks
0 to 10 10YR 3/	2 100					COARSE SAND	
10 to 22 10YR 2/	2 98	7.5YR 4/6	2	С	М	SAND	
Type: C=Concentration, D=Deple	etion, RM=Redu	uced Martix, CS=C	overed or	Coated S	Sand Gra	ains. ² Location: PL=Pore Lir	ning, M=Matrix.
Hydric Soil Indicators:						Indicators for Problemat	ic Hydric Soils: ³
Histosol (A1)		Sandy Gleyed M	atrix (S4)			Coast Prairie Redox (A16	i)
Histic Epipedon (A2)		Sandy Redox (S	5)			Iron-Manganese Masses	(F12)
Black Histic (A3)		Stripped Matrix (S6)			Dark Surface (S7)	
Hydrogen Sulfide (A4)		Loamy Mucky M	ineral (F1)			Very Shallow Dark Surfac	e (TE12)
Stratified Layers (A5)		Loamy Gleyed N	latrix (F2)				-)
2 cm Muck (A10)		Depleted Matrix	(F3)			Uther (Explain in Remark	S)
Depleted Below Dark Surface (A1	1)	Redox Dark Sur	ace (F6)				
Thick Dark Surface (A12)		Depleted Dark S	urface (F7))		2	
Sandy Mucky Mineral (S1)		Redox Depressi	ons (F8)			Indicators of hydrophytic v wetland bydrology must be	regetation and
5 cm Mucky Peat or Peat (S3)						disturbed or proble	ematic.
\square Restrictive Layer (if obse	erved):						
Туре:						Hydric Soil Present?	Ves No X
Depth (inches):	;						
Popul (distor)	play indicators of	hydric soil.					
Remarks: The observed soil profile failed to dis (YDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of c	olay indicators of	hydric soil. check all that appl	y)			Secondary Indicators (miinmum of two required)
Remarks: The observed soil profile failed to dis [YDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of c	blay indicators of : ne is required;	hydric soil. check all that appl	y) ed Leaves ((B9)		Secondary Indicators ((minimum of two required) racks (B6)
Remarks: The observed soil profile failed to dis IYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of c Surface Water (A1) High Water Table (A2)	olay indicators of	hydric soil.	y) ed Leaves (na (B13)	(B9)		Secondary Indicators (Surface Soil C Drainage Patte	(minimum of two required) racks (B6) erns (B10)
YDROLOGY YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3)	olay indicators of	hydric soil. check all that appl Water-Staine Aquatic Faur True Aquatic	y) ed Leaves (aa (B13) Plants (B1	(B9) 4)		Secondary Indicators (Surface Soil C Drainage Patte Dry-Season W	(minimum of two required) racks (B6) erns (B10) ater Table (C2)
YDROLOGY YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	blay indicators of	hydric soil. check all that appl Water-Staine Aquatic Faur True Aquatic Hydrogen Su	y) ed Leaves (na (B13) Plants (B1 Ilfide Odor ((B9) 4) (C1)		Secondary Indicators (Surface Soil C Drainage Patte Dry-Season W Crayfish Burro	(minimum of two required) racks (B6) rrns (B10) ater Table (C2) ws (C8)
YDROLOGY YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	blay indicators of	hydric soil. check all that appl Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi	y) ed Leaves (ha (B13) Plants (B1 Ifide Odor (zospheres	(B9) 4) (C1) along Livir	ug Roots (Secondary Indicators (Surface Soil C Drainage Patte Dry-Season W Crayfish Burrov C3)Saturation Visi	(minimum of two required) racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9)
YDROLOGY YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	olay indicators of	hydric soil. check all that appl Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of	y) ed Leaves (aa (B13) Plants (B1 Ifide Odor (zospheres Reduced Ir	(B9) 4) (C1) along Livir ron (C4)	ng Roots (Secondary Indicators (Surface Soil C Drainage Patte Dry-Season W Crayfish Burro C3)Saturation Visi Stunted or Stre	(minimum of two required) racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9) essed Plants (D1)
YDROLOGY YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	blay indicators of	hydric soil. check all that appl Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron I	y) ed Leaves (la (B13) Plants (B1 Ifide Odor (zospheres Reduced In Reduced In	(B9) 4) (C1) along Livir on (C4) n Plowed S	ng Roots (Soils (C6)	Secondary Indicators (Surface Soil C Drainage Patte Dry-Season W Crayfish Burrov C3)Saturation Visi Stunted or Stre Geomorphic Pa	(minimum of two required) racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9) essed Plants (D1) osition (D2)
Remarks: The observed soil profile failed to dis YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c 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)	blay indicators of	hydric soil. check all that appl Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron I Thin Muck S	y) ed Leaves (ha (B13) Plants (B1 Ifide Odor (zospheres Reduced In Reduced In Reduction in urface (C7)	(B9) 4) (C1) along Livir ron (C4) n Plowed S	ng Roots (Soils (C6)	C3) Secondary Indicators (Surface Soil C Drainage Patte Dry-Season W Crayfish Burror Saturation Visi Geomorphic Pette FAC-Neutral Technology	(minimum of two required) racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9) essed Plants (D1) osition (D2) est (D5)
Remarks: The observed soil profile failed to dis YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c 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 Imag	ery (B7)	hydric soil. check all that appl Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron I Thin Muck S Gauge or Wi Other (Evola	y) ed Leaves (ha (B13) Plants (B1 Ifide Odor (zospheres Reduced In Reduced In Reduction in urface (C7) ell Data (DS	(B9) 4) (C1) along Livir on (C4) n Plowed S) 9)	ng Roots (Soils (C6)	Secondary Indicators (Surface Soil C Drainage Patte Dry-Season W Crayfish Burror C3)Saturation Visi Stunted or Stre Geomorphic Patter FAC-Neutral Terms	(minimum of two required) racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9) essed Plants (D1) osition (D2) est (D5)
Remarks: The observed soil profile failed to dis YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c 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 Imag Sparsely Vegetated Concave Sur	olay indicators of the strequired; one is required; ery (B7) f. (B8)	hydric soil. check all that appl Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron I Thin Muck S Gauge or Wi Other (Expla	y) ed Leaves (ha (B13) Plants (B1 Ilfide Odor (zospheres Reduced In Reduced In Reduction in urface (C7) ell Data (DS in in Reman	(B9) 4) (C1) along Livir ron (C4) n Plowed S) 9) rks)	ig Roots (Soils (C6)	Secondary Indicators (Surface Soil C Drainage Patte Dry-Season W Crayfish Burror C3)Saturation Visi Stunted or Stre Geomorphic Pe FAC-Neutral Te	(minimum of two required) racks (B6) rrns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9) essed Plants (D1) position (D2) est (D5)
Remarks: The observed soil profile failed to dis IYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of c 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 Imag Sparsely Vegetated Concave Sur Field Observations: Surface Water Present?	ery (B7) f. (B8)	hydric soil.	y) ed Leaves (ha (B13) Plants (B1 Jospheres Reduced In Reduced In Reduction in urface (C7) ell Data (DS in in Remai	(B9) 4) (C1) along Livir ron (C4) n Plowed S) 9) rks)	ng Roots (Soils (C6)	Secondary Indicators (Surface Soil C Drainage Patte Dry-Season W Crayfish Burror C3)Saturation Visi Stunted or Stre Geomorphic Pu FAC-Neutral Tr	(minimum of two required) racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9) essed Plants (D1) osition (D2) est (D5)
Remarks: The observed soil profile failed to dis IVDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of c 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 Imag Sparsely Vegetated Concave Sur Field Observations: Surface Water Present?	ery (B7) f. (B8) Yes N	hydric soil. check all that appl Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron I Thin Muck S Gauge or W Other (Expla	y) ed Leaves (Plants (B1 Plants (B1 Ifide Odor (zospheres Reduced In Reduction in urface (C7) ell Data (DS in in Remain (inches):	(B9) 4) (C1) along Livir ron (C4) n Plowed S) 9) rks)	ng Roots (Soils (C6)	Secondary Indicators (Surface Soil Ci Drainage Patte Dry-Season W Crayfish Burrov Crayfish Burrov Crayfish Burrov Saturation Visi Stunted or Stre Geomorphic Period FAC-Neutral Tre	(minimum of two required) racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9) essed Plants (D1) osition (D2) est (D5)
Remarks: The observed soil profile failed to dis IYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of c 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 Imag Sparsely Vegetated Concave Sur Field Observations: Surface Water Present? Water Table Present?	ery (B7) f. (B8) Yes N Yes N Yes N	hydric soil.	y) ed Leaves (ha (B13) Plants (B1 Ilfide Odor (zospheres Reduced In Reduced In Reduction in urface (C7) ell Data (D9 in in Remain (inches): (inches): (inches):	(B9) (C1) along Livir on (C4) n Plowed S) 9) rks)	ig Roots (Soils (C6)	Secondary Indicators (Surface Soil C Drainage Patte Dry-Season W Crayfish Burror C3) Saturation Visi Stunted or Stre Geomorphic Pe FAC-Neutral Te Wetland Hydrology Prese	(minimum of two required) racks (B6) rrns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9) essed Plants (D1) osition (D2) est (D5) nt? Yes No_X
Remarks: The observed soil profile failed to dis IVDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of c 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 Imag Sparsely Vegetated Concave Sur Field Observations: Surface Water Present? Water Table Present? Saturation Present?	ery (B7) f. (B8) Yes N Yes N Yes N	hydric soil.	y) ed Leaves (la (B13) Plants (B1 Ifide Odor (zospheres Reduced In Reduced In Reduction ii urface (C7) ell Data (D9 in in Remain (inches): (inches): (inches):	(B9) 4) (C1) along Livir ron (C4) n Plowed \$) 9) rks) 	g Roots (Soils (C6)	Secondary Indicators (Surface Soil C Drainage Patte Dry-Season W Crayfish Burrov Saturation Visi Stunted or Stree Geomorphic Pe FAC-Neutral Tree Wetland Hydrology Prese	(minimum of two required) racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9) essed Plants (D1) osition (D2) est (D5) nt? Yes No_X
Remarks: The observed soil profile failed to dis IVDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of c 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 Imag Sparsely Vegetated Concave Sur Field Observations: Surface Water Present? Water Table Present? Water Table Present? Describe Recorded Data (stream gauge)	ery (B7) f. (B8) Yes N Yes N yes N ge, monitoring we	hydric soil.	y) ed Leaves (ha (B13) Plants (B1 Ifide Odor (zospheres Reduced In Reduced In Reduction in urface (C7) ell Data (D9 in in Remain (inches): (inches): (inches): (inches): ious inspec	(B9) 4) (C1) along Livir ron (C4) n Plowed S) 9) rks) ctions), if av	ng Roots (Soils (C6)	Secondary Indicators (Surface Soil Ci Drainage Patte Dry-Season W Crayfish Burror Saturation Visi Stunted or Stre Geomorphic Pro- FAC-Neutral Tre Wetland Hydrology Prese	(minimum of two required) racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9) essed Plants (D1) osition (D2) est (D5) nt? Yes No_X
Remarks: The observed soil profile failed to dis IYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of c 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 Imag Sparsely Vegetated Concave Sur Field Observations: Sutface Water Present? Water Table Present? Saturation Present? Describe Recorded Data (stream gauge	ery (B7) f. (B8) Yes N Yes N Yes N ye, monitoring we	hydric soil. check all that appl Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron I Thin Muck S Gauge or W Other (Expla lo <u>X</u> Depth lo <u>X</u> Depth II, aerial photos, prev	y) ed Leaves (Plants (B1 Ifide Odor (zospheres Reduced In Reduced In Reduced In Reduced In in Remain (inches): (inches): (inches): ious inspec	(B9) 4) (C1) along Livir ron (C4) n Plowed S) 9) rks) ctions), if av	ng Roots (Soils (C6)	Secondary Indicators (Surface Soil Ci Drainage Patte Dry-Season W Saturation Visi Saturation Visi Stunted or Stre Geomorphic Pe FAC-Neutral Tre Wetland Hydrology Prese	(minimum of two required) racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9) essed Plants (D1) osition (D2) est (D5) nt? Yes No_X
Remarks: The observed soil profile failed to dis IYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of c 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 Imag Sparsely Vegetated Concave Sur Field Observations: Surface Water Present? Water Table Present? Saturation Present? Describe Recorded Data (stream gauge Remarks: The area failed to meet water of budget	ery (B7) f. (B8) Yes N Yes N Yes N ye, monitoring we	hydric soil.	y) ed Leaves (la (B13) Plants (B1 Ifide Odor (zospheres Reduced In Reduced In Reduction in urface (C7) ell Data (D9 in in Remain (inches): (inches): (inches): (inches): (inches):	(B9) 4) (C1) along Livir ron (C4) n Plowed S) 9) rks) ctions), if av	g Roots (Soils (C6)	Secondary Indicators (Surface Soil C Drainage Patte Dry-Season W Crayfish Burrov Sturation Visi Sturated or Stree Geomorphic Pe FAC-Neutral Tree Wetland Hydrology Prese	(minimum of two required) racks (B6) erns (B10) ater Table (C2) ws (C8) ble on Aerial Imag.(C9) essed Plants (D1) osition (D2) est (D5) nt? Yes No_X

Project/Site: Gretna Bottoms		City/Coun	ty:	Sarpy Coun	ty S	Sampling Da	ite: 4	/28/20	15	
Applicant/Owner: Lyman-Richey	Corporation			State	NE	Sampling Po	oint:	Ag-13		
Investigators: Ben Fisher	Austin Zigler			Section, Tow	nship, Range	S9 T	13N	R 1	0E	
Landform (hillslope, terrace, etc.):	Hillslope			Local Reli	ief (concave, co	nvex, none):	: Cor	ivex		
Slope(%): 1 Lat:	41.1105652003788	Long:	-96.29702202	9496	Datum:	NAD 1983				
Soil Map Unit Name: Gibbon Ioa	my fine sand, overwash, occ	asionally floo	oded		NWI Classificat	ion: None				
Are climatic / hydrologic conditions o	n the site typical for this time	of year?	Yes X	No	(If No, expla	ain in Remarl	·ks)			
Are Vegetation, Soil,	Hydrology, significantl	y disturbed?	A	Are "Normal (Circumstances"	present?	Yes	х	No	
Are Vegetation, Soil,	Hydrology, naturally p	roblematic?		(If needed,	explain any ans	wers in Rem	narks.)			
SUMMARY OF FINDINGS -	Attach a site map sho	owing sar	nplina poi	nt locatio	ns. transect	s. import	ant f	eatur	es. et	C.
Hydrophytic Vegetation Present?	Yes No X								<u>,</u>	<u>.</u>
Hydric Soil Present?	Yes No X	Is the S	ampled Area							
Wetland Hydrology Present?	Yes No X	within a			Yes	No	X	-		
Remarks:										
The area characterized by this data hydric soils, and wetland hydrology	form is an upland area at the criteria. Agricultural crops ha	edge of an d not been p	agricultural fie lanted as of th	ld. The area he date of the	failed to display e field visit.	y indicators c	of hydr	ophytic	; vegeta	ation,
VEGETATION- Use scientif	ic names of plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominance	Fest Worksh	heet:			
Tree Stratum					Number of D	ominant Spe	ecies		4	(•)
Shrub Stratum					That Are OB	L, FACW, or	FAC:			_ (A)
Herb Stratum (Plot size	:6Ft)				Total Number	r of Dominan	nt			
Descurainia incana	/	40	Y	UPL	Species Acro	ss all Strata:	:		2	(B)
Equisetum hyemale		20	Y	FACW	Percent of Do	minant Spec	cies			(
Thlaspi arvense		10	N	FACU	That Are OBL	, FACW, or	FAC:		50.0%	_(A/B)
Cirsium arvense		2	<u>N</u>	FACU	Prevalence I	ndex Works	sheet:			
		12	_=Total Cover		Total % (Cover of		Multir	olv bv	
vine Stratum						0)	$\frac{1}{x 1} =$	0	
					FACW specie	20	0	x 2 =	40	
					FAC species	0)	x 3 =	0	
					FACU specie		2	x 4 =	48	
						4(0	x 5 =	200	
							72	(A)	288	(B)
					Drovolo	s. <u> </u>	`		4.00	/
					Fievale		D/A=		4.00	
					Hydrophytic	Vegetation I	ndica	iors:		
					Rapid Te	st for Hydrop	phytic	Vegeta	ition	
					Dominan	ce Test > 50	1%			
					Prevalen	ce Index ≤ 3 .	.0			
					Morpholo data in R Problema	ogical Adapta emarks or or atic Hydrophy	ations n a ser vtic Ve	(Provid parate parate	de supp sheet) on (Exi	orting
					Indicators of	hydric soil a unless distur	and we	tland h	ydrolog	ly must
					Hydroph Vegetation P	ytic resent?	Yes		No	x
Remarks: (Include photo numbers h	ere or on a separate sheet.)									

The area is dominated by upland vegetation and displays approximately 30% bare ground.



Profile Descr	ription: (Des	cribe to the	depth nee	ded to document	the indi	cator or	confirm	the absence of Indic	ators.)		
Depth		Matrix		R	edox Fea	atures					
(inches)	Color	(moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remar	ks
0 to 6	10YR	4/2	100					SAND			
6 to 10	10YR	5/1	100					SAND			
10 to 22	10YR	3/1	98	7.5YR 4/6	2	С	М	SANDY LOAM			
¹ Type: C=Cor	ncentration, D	=Depletion,	RM=Reduc	ced Martix, CS=Co	overed or	Coated	Sand Gra	ins. ² Location: F	^D L=Pore Lining, N	/I=Matrix.	
Hydric Soil I	Indicators:							Indicators for 1	Problematic Hy	dric Soils:	3
Histosol (A	.1)			Sandy Gleyed Ma	atrix (S4)			Coast Prairie	Redox (A16)		
Histic Epip	edon (A2)			Sandy Redox (S5	5)				ese Masses (F12)		
Black Histi	c (A3)			Stripped Matrix (S	6)				(87)		
Hydrogen S	Sulfide (A4)			Loamy Mucky Mir	neral (F1)				3 (57)		
Stratified L	ayers (A5)			Loamy Gleyed Ma	atrix (F2)			Very Shallow	/ Dark Surface (TF1	2)	
2 cm Muck	(A10)			Depleted Matrix (I	F3)			Other (Expla	in in Remarks)		
	Selow Dark Sur	face (A11)		Bedox Dark Surfa	ace (E6)						
Thick Dark	Surface (A12)				urfaco (E7)	`					
	Ninorol (S))		³ Indicators of	hydrophytic vegetat	ion and	
5 cm Muck	x Peat or Peat) (S3)	L	_ Redox Depression	ns (F8)			wetland hydrol distur	ogy must be presen bed or problematic.	it, unless	
	ive Laver (if observed	4):								
Type [.]											
Depth (incl	hes).							Hydric Soil Prese	ent? Ye	s	No X
Remarks:											
	<u> </u>										
	,,,,,										
Primary Indic	ators (minim	um of one is	required; c	heck all that apply	r)			Secondary	Indicators (minim	um of two re	equired)
Surface Wa	ater (A1)			Water-Stained	d Leaves ((B9)			urface Soil Cracks (B6)	
High Wate	r Table (A2)			Aquatic Fauna	a (B13)	. ,			rainage Patterns (B	10)	
Saturation	(A3)			True Aquatic I	Plants (B1	4)		Di	ry-Season Water Ta	ble (C2)	
U Water Mar	ks (B1)			Hydrogen Sulf	fide Odor	(C1)		Ci	rayfish Burrows (C8)	
Sediment [Deposits (B2)			Oxidized Rhiz	ospheres	along Livir	ng Roots (0	C3) 🗌 Sa	aturation Visible on	Aerial Imag.(C	29)
Drift Depos	sits (B3)			Presence of R	Reduced Ir	ron (C4)		St	unted or Stressed F	Plants (D1)	
Algal Mat o	or Crust (B4)			Recent Iron R	eduction i	in Plowed	Soils (C6)	G	eomorphic Position	(D2)	
Iron Depos	sits (B5)			Thin Muck Su	rface (C7)		F/	AC-Neutral Test (D5	5)	
Inundation	Visible on Aer	ial Imagery (B	7)	Gauge or We	ll Data (D	9)					
Sparsely V	egetated Cond	ave Surf. (B8)		Other (Explain	n in Rema	ırks)					
Field Observ	vations:										
Surface Wate	er Present?	Yes	No	X Depth	(inches):						
Water Table	Present?	Yes	No	X Depth	(inches):						
Saturation P	resent?	Yes	No	X Depth	(inches):			Wetland Hydrol	ogy Present?	Yes	<u>NO_X</u>
Describe Recor	ded Data (stre	am gauge, mo	nitoring well,	aerial photos, previo	ous inspec	ctions), if a	vailable:				
Pomarka											
The area failed	d to meet wetla	nd hydrology	criteria.								

Project/Site: Gretna Bottoms	City/County:	Sarpy Cour	nty	Sampling Date:	4/29/2015	
Applicant/Owner: Lyman-Richey Corporation		State	: NE	Sampling Point:	Ag-14	
Investigators: Ben Fisher A	ustin Zigler	Section, Tov	wnship, Range	S 9 T 13N	R 10E	
Landform (hillslope, terrace, etc.): None		Local Rel	lief (concave, co	onvex, none): N	one	
Slope(%): 0 Lat: 41.1164473855	021 Long: -96.2975690	131385	Datum:	NAD 1983		
Soil Map Unit Name: Gibbon loamy fine sand, over	erwash, occasionally flooded		NWI Classificat	tion: None		
Are climatic / hydrologic conditions on the site typical f	for this time of year? Yes X	No	(If No, expla	ain in Remarks)		
Are Vegetation, Soil, Hydrology,	significantly disturbed?	Are "Normal	Circumstances"	present? Yes	X No	
Are Vegetation, Soil, Hydrology,	naturally problematic?	(If needed,	explain any ans	swers in Remarks	s.)	
SUMMARY OF FINDINGS - Attach a site	map showing sampling po	oint locatio	ons. transect	ts. important	features. et	t c .
Hydrophytic Vegetation Present? Yes X N	lo			<u></u> ,	<u></u>	
Hydric Soil Present? Yes	lo X Is the Sampled Area	а	N.			
Wetland Hydrology Present? Yes	lo X		Yes	NOX	_	
Remarks:						
The area characterized by this data form is an upland	area in an agricultural field. The ar	ea failed to di	splay indicators	of hydric soil and	wetland hydrol	logy;
however, the area met hydrophytic vegetation criteria	a. Agricultural crops had not been pla	inted as of the	e date of the field	d visit.		
VEGETATION Use scientific names of pl	lants. <u>Absolute</u> <u>Dominant</u> <u>% Cover</u> <u>Species</u>	Status	Dominance .	Test Worksheet		
Tree Stratum			Number of D	ominant Species	1	
Shrub Stratum			That Are OB	L, FACW, or FAC):1	(A)
Herb Stratum (Plot size: 6 Et)			Total Numbe	r of Dominant		
Equisetum hyemale	100 Y	FACW	Species Acro	oss all Strata:	1	(B)
	100 =Total Cove		Dereent of D	minant Chasica		
Vine Stratum			That Are OBI	L, FACW, or FAC	: 100.0%	(A/B)
			Drevelance	nday Markahaa	4.	
					L. Multiply by:	
				0	$\frac{1}{x 1 = 0}$	
				100	$x^2 = 200$	
			EAC species	0	x 3 = 0	
			EACU species	0	x 4 = 0	
				0	x 5 = 0	
				. 100	(A) 200	(B)
			Column I ota	ls:	_(A)	<u>(</u> D)
			Prevale	ence Index = B/A:	= 2.00	
			Hydrophytic	Vegetation Indic	ators:	
			X Rapid Te	est for Hydrophyti	c Vegetation	
			X Dominan	ice Test > 50%		
			X Prevalen	ce Index ≤ 3.0		
			Morpholo	ogical Adaptation	s (Provide supp	oorting
			Problema	atic Hydrophytic \	Vegetation (Ex	plain)
			Indicators of be present,	hydric soil and w unless disturbed	etland hydrolog or problematic.	gy must
			Hydroph Vegetation P	ytic Present? Yes	X No	
Remarks: (Include photo numbers here or on a separ	rate sheet.)		1			
me area displayed dominant hydrophytic vegetation.						



Profile Descr	ription: (Des	cribe to the	depth nee	ded to document	the indi	cator or	confirm t	the absence of Indicators.)		
Depth		Matrix		R	edox Fea	atures				
(inches)	Color	· (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rema	arks
0 to 6	10YR	4/2	100					SAND		
6 to 14	10YR	5/1	100					SAND		
14 to 22	10YR	2/1	98	7.5YR 4/6	2			SILTY CLAY LOAM		
¹ Type: C=Cor	ncentration, I	D=Depletion,	RM=Reduc	ced Martix, CS=Co	vered or	Coated	Sand Gra	ins. ² Location: PL=Pore Lining	J, M=Matrix.	
Hydric Soil I	Indicators:							Indicators for Problematic	Hydric Soils	: ³
Histosol (A	(1)			Sandy Gleyed Ma	trix (S4)			Coast Prairie Redox (A16)		-
Histic Epip	edon (A2)			Sandy Redox (S5)				2)	
Black Histi	c (A3)			Stripped Matrix (S	6)				L)	
Hydrogen :	Sulfide (A4)		Г	Loamy Mucky Mir	neral (F1)			Dark Surface (S7)		
Stratified I	avers (A5)		Γ	I oamv Gleved Ma	atrix (F2)			Very Shallow Dark Surface (ſF12)	
	α (Δ10)		Г		=2)			Other (Explain in Remarks)		
	Colow Dork Su	face (A11)			3) (EC)					
		lace (ATT)		_ Redox Dark Surfa	ICE (F6)					
	Surface (A12)		L	Depleted Dark Su	rface (F7)		³ Indicators of hydrophytic year	etation and	
Sandy Muc	cky Mineral (S)		Redox Depression	ns (F8)			wetland hydrology must be pre	sent, unless	
5 cm Muck	ky Peat or Peat	(S3)						disturbed or problema	itic.	
Restrict	ive Layer (if observe	d):							
Туре:								Hvdric Soil Present?	Yes	No X
Depth (incl	hes):							,		
HYDROLOG Wetland Hyd Primary India	GY drology Ind cators (minim	icators: um of one is	required: c	beck all that apply)			Secondary Indicators (mi	nimum of two) required)
Surface W	otor (A1)			Water-Stainer		(BQ)			(B6)	
	r Table (A2)				(B13)	(69)			(B10)	
	$(\Lambda 2)$				lante (B1	4)		Dry-Season Wate	(B10) Table (C2)	
Water Mar	(A3) ke (B1)			Hydrogen Sult	ide Odor				(C8)	
Sediment [Denosits (B2)			Oxidized Rhiz	ospheres	along Livir	na Roots (C	C3) Saturation Visible	on Aerial Imag	.(C9)
	sits (B3)			Presence of R	educed Ir	on (C4)	.g 1 00 00 (1	Stunted or Stresse	ed Plants (D1)	()
Algal Mat o	or Crust (B4)			Recent Iron R	eduction i	n Plowed S	Soils (C6)	Geomorphic Posit	ion (D2)	
Iron Depos	sits (B5)			Thin Muck Su	rface (C7)	()	✓ FAC-Neutral Test	(D5)	
Inundation	Visible on Aer	ial Imagery (B	7)	Gauge or We	Data (D	9)		—	. ,	
Sparsely V	egetated Cond	ave Surf. (B8)	1	Other (Explain	n in Rema	rks)				
Field Observ	vations:									
Surface Wat	er Present?	Yes	No	X Depth	(inches):					
Water Table	Present?	Yes	No	X Depth	(inches):					
Saturation P	resent?	Yes	No	X Depth	(inches):			Wetland Hydrology Present?	Yes	NoX
Describe Recor	ded Data (stre	am gauge, mo	nitoring well,	aerial photos, previo	ous inspec	ctions), if a	vailable:			
Remarks:										
The area failed	d to meet wetla	nd hydrology	criteria.							

Project/Site: Gretna Bottoms	City/County:	Sarpy Cour	ity	Sampling Date:	4/30/20)15	
Applicant/Owner: Lyman-Richey Corporation		State	: NE	Sampling Point:	Ag-15		
Investigators: Ben Fisher Austin Zi	gler	Section, Tov	vnship, Range	S 16 T 13N	R	10E	
Landform (hillslope, terrace, etc.): Depression		Local Rel	ief (concave, co	onvex, none): C	oncave		
Slope(%): 0 Lat: 41.0962704747287	Long: -96.3075324	4399699	Datum:	NAD 1983			
Soil Map Unit Name:Gibbon-Wann complex, occasionally	/ flooded		NWI Classificat	tion: None			
Are climatic / hydrologic conditions on the site typical for this ti	me of year? Yes X	No	(If No, expla	ain in Remarks)			
Are Vegetation <u>X</u> , Soil <u>,</u> Hydrology <u>,</u> signific	antly disturbed?	Are "Normal	Circumstances'	' present? Yes	\$	No	Х
Are Vegetation, Soil, Hydrology, natural	ly problematic?	(If needed,	explain any ans	swers in Remark	s.)		
SUMMARY OF FINDINGS - Attach a site map	showing sampling po	oint locatio	ns. transec	ts. important	featur	res. et	c.
Hydrophytic Vegetation Present? Yes No X	<u></u>			,		,	
Hydric Soil Present? Yes X No	Is the Sampled Are	ea		(N.			
Wetland Hydrology Present? Yes X No			Yes)	K NO			
Remarks:	-						
The area characterized by this data form is a wetland area in	an agricultural field. The are	ea displayed ir	dicators of hyd	ric soil and wetla	nd hydro	ology;	
nowever, the area failed to meet hydrophytic vegetation criter	ria. Agricultural crops had no	ot been planted	as of the date	of the field visit.			
	Absoluto Dominant	Indicator					
VEGETATION – Use scientific names of plants.	<u>% Cover</u> Species	Status	Dominance	Test Worksheet	:		
			Number of D	ominant Species	5		
			That Are OB	L, FACW, or FAC):	0	_ (A)
			Total Numbe	r of Dominant			
			Species Acro	oss all Strata:		0	(B)
			Percent of D	ominant Species			
			That Are OB	L, FACW, or FAC	:	0.0%	_(A/B)
			Prevalence	Index Workshee			
			Total % (Cover of	•• Multi	nly hy:	
				0	$\frac{1}{x 1} =$	0	
			FACW specie	es 0	x 2 =	0	
			FAC species	0	x 3 =	0	
			FACU specie	es 0	x 4 =	0	
			UPL species	0	x 5 =	0	
			Column Toto	0	(A)	0	(B)
			Column Tota	15	_`´_		/
			Prevale	ence index = D/A	= 		
			Hydrophytic	Vegetation Indic	ators:		
			Rapid Te	est for Hydrophyt	c Vegeta	ation	
			Dominan	nce Test > 50%			
			Prevalen	ice Index ≤ 3.0			
			Morpholo	ogical Adaptation Remarks or on a s	s (Provi separate	ide supp sheet)	orting
			Problema	atic Hydrophytic	Vegetatio	on (Ex	plain)
			Indicators of be present,	f hydric soil and v unless disturbed	vetland h or proble	nydrolog ematic.	jy must
			Hydroph Vegetation F	ytic Present? Yes		No 2	x
Remarks: (Include photo numbers here or on a separate shee No vegetation was observed.	et.)		<u> </u>				<u> </u>



Profile Descr	iption: (Des	cribe to the	depth nee	eded to docume	nt the indi	cator or o	confirm t	he absence of Indicators.)	
Depth		Matrix			Redox Fea	atures			
(inches)	Color	r (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 6	10YR	3/1	98	7.5YR 4/6	2	С	Μ	LOAMY SAND	
6 to 16	10YR	2/1	95	7.5YR 4/6	5	С	М	LOAMY SAND	
16 to 20	10YR	2/1	98	7.5YR 4/6	2	С	М	SANDY CLAY LOAM	
¹ Type: C=Cor	centration, D	D=Depletion,	RM=Redu	ced Martix, CS=0	Covered or	Coated S	Sand Grai	ns. ² Location: PL=Pore Lining, N	/I=Matrix.
Hydric Soil I Histosol (A	Indicators:		[Sandy Gleyed I	Matrix (S4)			Indicators for Problematic Hyd	<u>dric Soils:</u> ³
Black Histi	c (A3)		[Stripped Matrix	(S6)			Iron-Manganese Masses (F12)	
Hydrogen S	Sulfide (A4)		[Loamy Mucky N	Vineral (F1)			Dark Surface (S7)	-
Stratified L	ayers (A5)			Loamy Gleyed	Matrix (F2)			Very Shallow Dark Surface (TF1	2)
2 cm Muck	(A10)		[Depleted Matrix	k (F3)			└── Other (Explain in Remarks)	
Depleted B	elow Dark Sur	face (A11)	[Redox Dark Su	rface (F6)				
Thick Dark	Surface (A12))	[Depleted Dark	Surface (F7))		3	
Sandy Muc	cky Mineral (S	1)	[Redox Depress	sions (F8)			 Indicators of hydrophytic vegetat wetland hydrology must be present 	ion and it, unless
5 cm Muck	y Peat or Peat	: (S3)						disturbed or problematic.	
Restrict	ive Layer (if observe	d):						
Туре:								Hydric Soil Present? Ye	s X No
Depth (incl	nes):								
Remarks:	aail arafila ma	ata hudria aail	oritorio						
The observed		ets fryund son	cillena.						
HYDROLOG	Υ								
Wetland Hye	drology Ind	icators:	required: (check all that and	alv)			Secondary Indicators (minim	num of two required)
			required, t						
	ater (A1) r Tablo (A2)				ieu Leaves (D9)		Drainage Patterns (B)	50 <i>)</i> 10)
					nia (DIS) c Plante (B1	4)		Drainage Fatterins (D	able (C2)
Water Mar	(A3) ks (B1)			Hydrogen S	ulfide Odor i) (C1)		Cravfish Burrows (C8)
	Denosits (B2)				nizospheres	along Livin	a Roots (C	(3) Saturation Visible on	, Aerial Imag.(C9)
	sits (B3)				f Reduced Ir	on (C4)	9.00000	Stunted or Stressed F	Plants (D1)
Algal Mat g	or Crust (B4)			Recent Iron	Reduction i	n Plowed S	Soils (C6)	Geomorphic Position	(D2)
	its (B5)			Thin Muck	Surface (C7))	()	FAC-Neutral Test (D5	;)
	Visible on Aer	ial Imagery (B	7)	Gauge or V	Vell Data (DS	, 9)			,
Sparsely V	egetated Cond	cave Surf. (B8)	Other (Expl	ain in Rema	rks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	No	D <u>X</u> Dept	th (inches):				
Water Table	Present?	Yes	No	Dept	th (inches):				
Saturation P	resent?	Yes	<u>X</u> No	Dept	th (inches):		0	Wetland Hydrology Present?	Yes <u>X</u> No
Describe Recor	ded Data (stre	am gauge, mo	nitoring well	, aerial photos, pre	vious inspec	tions), if av	ailable:		
Remarks:	aved surface o	aturation: wot	and hydrolog	av criteria is mot					
	ayeu sunace s	aturation, wet		gy ontend is met.					

Project/Site: Gretna Bottoms		City/Count	y:	Sarpy Coun	ty	Sampling Da	ate: 4	/30/201	5	
Applicant/Owner: Lyman-Richey	y Corporation			State	: NE	Sampling Po	oint: /	Ag-16		
Investigators: Ben Fisher	Austin Zigler			Section, Tow	vnship, Range	S 16 T	13N	R 10)E	
Landform (hillslope, terrace, etc.):	Depression			Local Reli	ief (concave, co	onvex, none)): Con	ncave		
Slope(%): 0 Lat:	41.0982418095661	Long: -	96.30923431	44373	Datum:	NAD 1983				
Soil Map Unit Name: Gibbon-Wa	ann complex, occasionally flo	oded			NWI Classifica	tion: None)			
Are climatic / hydrologic conditions c	on the site typical for this time	of year?	Yes X	No	(If No, expl	ain in Remai	rks)			
Are Vegetation <u>X</u> , Soil,	Hydrology, significantl	y disturbed?	ŀ	Are "Normal (Circumstances	" present?	Yes		No	Х
Are Vegetation, Soil,	Hydrology, naturally p	roblematic?		(If needed,	explain any ans	swers in Ren	narks.)		_	
SUMMARY OF FINDINGS -	Attach a site map sho	owing san	nolina poi	nt locatio	ns. transec	ts. import	tant f	eature	es. et	c.
Hydrophytic Vegetation Present?	Yes No X					<u></u> ,			,	
Hydric Soil Present?	Yes X No	Is the Sa within a	ampled Area Wetland?			Z N 1-				
Wetland Hydrology Present?	Yes X No	within a	Wettand		Yes 2	K NO _		-		
Remarks:										
The area characterized by this data however, the area failed to meet hy	a form is a wetland area in an vdrophytic vegetation criteria.	agricultural fi Agricultural c	eld. The area rops had not	displayed in been planted	dicators of hyd d as of the date	ric soil and v of the field v	vetland visit.	hydrolo	ogy;	
		Abaaluta	Deminent	Indiantan						
VEGETATION_ Use scienti	fic names of plants.	<u>Absolute</u> <u>% Cover</u>	<u>Species</u>	<u>Indicator</u> Status	Dominance	Test Works	heet			
					Number of D	Dominant Spe	ecies			
					That Are OB	L, FACW, or	r FAC:		0	_ (A)
					Total Numbe	r of Dominar	nt			
					Species Acro	oss all Strata	1:		0	(B)
					Percent of D That Are OB	ominant Spe L, FACW, or	cies FAC:	(0.0%	_(A/B)
					Prevalence	Index Works	sheet:			
					Total %	Cover of:		Multip	ly by:	
					OBL species	(0	x 1 =	0	
					FACW specie	es (0	x 2 =	0	
					FAC species	. (0	x 3 =	0	
					FACU speci	es (0	x 4 =	0	
					UPL species	(0	x 5 =	0	
					Column Tota		0 ((A)	0	(B)
					Proval	ence Index -	`			
							- <i>D</i> /A=			
					Hydrophytic	Vegetation	Indicat	tors:		
						est for Hydro		Vegetat	ion	
					Dominar	ice lest > 50	J%			
					Prevaler	ice index ≤ 3	3.0			
					data in F	ogical Adapta Remarks or o	ations on a ser	(Provide parate s	e supp heet)	orting
					Problem	atic Hydroph	nytic Ve	getatior	ו (Ex	plain)
					Indicators of be present,	f hydric soil a unless distui	and wet rbed or	tland hy probler	drolog natic.	jy must
					Hydroph Vegetation F	nytic Present?	Yes	N	lo]	x
Remarks: (Include photo numbers h	nere or on a separate sheet.)									



Depth N		eded to document	the indi	cator or	confirm t	he absence of Indicators.)	
	1atrix	R	edox Fea	atures			
(inches) Color (m	oist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 12 10YR	2/1 100		·			SANDY LOAM	
12 to 16 10YR	2/1 98	7.5YR 4/6	2	С	М	SANDY LOAM	
16 to 20 10YR	2/1 70					SANDY LOAM	
16 to 20 10YR	4/1 25	7.5YR 4/6	5	С	М	SANDY LOAM	
Type: C=Concentration, D=D	epletion, RM=Redu	iced Martix, CS=Co	overed or	Coated S	Sand Gra	ins. ² Location: PL=Pore Lining,	M=Matrix.
Hydric Soil Indicators:						Indicators for Problematic Hy	ydric Soils: ³
Histosol (A1)		Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A16)	
Histic Epipedon (A2)		Sandy Redox (S5	5)			Iron-Manganese Masses (F12)	
Black Histic (A3)		Stripped Matrix (S	S6)				
Hydrogen Sulfide (A4)		Loamy Mucky Mi	neral (F1)				
Stratified Layers (A5)		Loamy Gleved M	atrix (F2)			└── Very Shallow Dark Surface (TF	12)
2 cm Muck (A10)		Depleted Matrix (F3)			Other (Explain in Remarks)	
Depleted Below Dark Surface	Δ11)		10) 200 (E6)				
Thick Dark Surface (A12)	, (, (, (, (, (, (, (, (, (, (, (, (, (,						
						³ Indicators of hydrophytic vegeta	ation and
		Redox Depressio	ns (F8)			wetland hydrology must be prese	ent, unless
5 cm Mucky Peat or Peat (S3	•)					disturbed or problemation	C.
Restrictive Layer (if o	bserved):						
Туре:						Hydric Soil Present?	es X No
Depth (inches):							
IYDROLOGY							
Wetland Hydrology Indicat	ors:						
	of one is required:	chock all that apply	۵			Secondary Indicators (mini	mum of two required)
	of one is required;	check all that apply	/)			Secondary Indicators (minin	mum of two required)
Surface Water (A1)	of one is required;	check all that apply	/) d Leaves ((B9)		Secondary Indicators (minin	mum of two required) (B6)
Surface Water (A1) High Water Table (A2)	of one is required;	check all that apply U Water-Staine Aquatic Fauna	/) d Leaves (a (B13) Planta (B1	(B9)		Secondary Indicators (minin Surface Soil Cracks Drainage Patterns (F	mum of two required) (B6) 310) (20)
Surface Water (A1) High Water Table (A2) Saturation (A3)	of one is required;	check all that apply U Water-Staine Aquatic Fauna True Aquatic	/) d Leaves (a (B13) Plants (B1	(C1)		Secondary Indicators (minin Surface Soil Cracks Drainage Patterns (E Dry-Season Water T	mum of two required) (B6) 310) Table (C2)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	of one is required;	check all that apply Uter-Staine Aquatic Fauna True Aquatic Hydrogen Sul	/) d Leaves (a (B13) Plants (B1 fide Odor ((C1)	a Pooto ((Secondary Indicators (minin Surface Soil Cracks Drainage Patterns (E Dry-Season Water T Crayfish Burrows (C	mum of two required) (B6) 310) ^r able (C2) 8)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	of one is required;	check all that apply U Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of B	/) d Leaves (a (B13) Plants (B1 fide Odor cospheres	(B9) 4) (C1) along Livir	g Roots (C	Secondary Indicators (mining Surface Soil Cracks Drainage Patterns (F Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed	mum of two required) (B6) 310) "able (C2) 8) n Aerial Imag.(C9) Plants (D1)
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	of one is required;	check all that apply U Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F	/) d Leaves (a (B13) Plants (B1 fide Odor cospheres Reduced Ir	B9) 4) (C1) along Livir on (C4)	g Roots (C	Secondary Indicators (mining Surface Soil Cracks Drainage Patterns (F Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed	mum of two required) (B6) 310) Table (C2) 8) D Aerial Imag.(C9) Plants (D1)
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)	of one is required;	check all that apply U Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su	/) d Leaves (a (B13) Plants (B1 fide Odor (cospheres Reduced Ir Reduced Ir Reduction in	B9) (C1) along Livir on (C4) n Plowed S	g Roots (C Soils (C6)	Secondary Indicators (minin Surface Soil Cracks Drainage Patterns (f Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed Geomorphic Position	mum of two required) (B6) 310) able (C2) 8) A Aerial Imag.(C9) Plants (D1) n (D2)
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) Jundation Visible on Aerial Ir	of one is required;	check all that apply U Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We	() d Leaves (a (B13) Plants (B1 fide Odor (cospheres Reduced Ir Reduced Ir Reduction in urface (C7)	B9) 4) (C1) along Livir on (C4) n Plowed S) 3)	g Roots (C Soils (C6)	Secondary Indicators (minin Surface Soil Cracks Drainage Patterns (B Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed Geomorphic Position FAC-Neutral Test (D	mum of two required) (B6) 310) Table (C2) 8) n Aerial Imag.(C9) Plants (D1) n (D2) 95)
 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 Ir Sparsely Vegetated Concave 	of one is required; nagery (B7) Surf. (B8)	check all that apply U Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Gauge or We Other (Explain	/) d Leaves (a (B13) Plants (B1 fide Odor (cospheres Reduced Ir Reduced Ir Reduction in urface (C7) Il Data (DS n in Rema	(B9) (C1) along Livir on (C4) n Plowed S))) rks)	g Roots (C Soils (C6)	Secondary Indicators (mining Surface Soil Cracks Drainage Patterns (F Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed Geomorphic Position FAC-Neutral Test (D	mum of two required) (B6) 310) ⁷ able (C2) 8) n Aerial Imag.(C9) Plants (D1) n (D2) 95)
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 Ir Sparsely Vegetated Concave Field Observations:	nagery (B7) Surf. (B8)	check all that apply U Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain	/) d Leaves (a (B13) Plants (B1 fide Odor f cospheres Reduced Ir Reduced Ir Reduction in Reduction in urface (C7) Ill Data (DS n in Rema	B9) 4) (C1) along Livir on (C4) n Plowed S)) rks)	g Roots (C Soils (C6)	Secondary Indicators (minin Surface Soil Cracks Drainage Patterns (B Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed Geomorphic Position FAC-Neutral Test (D	mum of two required) (B6) 310) Table (C2) 8) n Aerial Imag.(C9) Plants (D1) n (D2) 95)
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 Ir Sparsely Vegetated Concave <u>Field Observations:</u> Surface Water Present?	nagery (B7) Surf. (B8) Yes N	check all that apply U Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Deoth	(inches);	B9) 4) (C1) along Livir on (C4) n Plowed S))) rks)	g Roots (C Soils (C6)	Secondary Indicators (mining Surface Soil Cracks Drainage Patterns (f Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed Geomorphic Position FAC-Neutral Test (D	mum of two required) (B6) 310) Table (C2) 8) n Aerial Imag.(C9) Plants (D1) n (D2) 95)
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 Ir Sparsely Vegetated Concave Field Observations: Surface Water Present? Water Table Present?	of one is required; nagery (B7) Surf. (B8) Yes N Yes N	check all that apply Water-Staine Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth o X	(inches):	(E9) (C1) along Livir on (C4) n Plowed S)) rks)	g Roots (C Soils (C6)	Secondary Indicators (mining Surface Soil Cracks Drainage Patterns (F Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed Geomorphic Position FAC-Neutral Test (D	mum of two required) (B6) 310) Table (C2) 8) A Aerial Imag.(C9) Plants (D1) 1 (D2) 95)
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 Ir Sparsely Vegetated Concave Field Observations: Surface Water Present? Water Table Present? Saturation Present?	nagery (B7) Surf. (B8) Yes N Yes N Yes N	check all that apply Water-Staine Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Vater-Staine Quatic Fauna True Aquatic Fauna Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth X Depth	(inches): (inches): (inches):	(B9) (C1) along Livir on (C4) n Plowed S)) rks)	g Roots (C Soils (C6)	Secondary Indicators (mining Surface Soil Cracks Drainage Patterns (F Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed Geomorphic Position FAC-Neutral Test (D Wetland Hydrology Present?	mum of two required) (B6) 310) Table (C2) 8) n Aerial Imag.(C9) Plants (D1) n (D2) 95) Yes <u>X</u> No_
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Ir Sparsely Vegetated Concave Field Observations: Surface Water Present? Water Table Present? Saturation Present? Describe Recorded Data (stream of	of one is required; nagery (B7) Surf. (B8) Yes N Yes N Yes N	check all that apply Water-Staine Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Vater-Staine Quatic Fauna True Aquatic Fauna Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth o X L aerial photos, previo	/) d Leaves (a (B13) Plants (B1 fide Odor f cospheres Reduced Ir Reduction in urface (C7) dl Data (DS n in Rema (inches): (inches): (inches):	(B9) 4) (C1) along Livir on (C4) n Plowed \$)) rks) 	g Roots (C Soils (C6)	Secondary Indicators (minin Surface Soil Cracks Drainage Patterns (E Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed Geomorphic Position FAC-Neutral Test (D Wetland Hydrology Present?	mum of two required) (B6) 310) Table (C2) 8) A Aerial Imag.(C9) Plants (D1) n (D2) 55) Yes <u>X</u> No
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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 Ir Sparsely Vegetated Concave Field Observations: Surface Water Present? Water Table Present? Saturation Present? Describe Recorded Data (stream g	of one is required; nagery (B7) Surf. (B8) Yes N Yes N Yes N Jauge, monitoring wel	check all that apply Water-Staine Aquatic Fauna True Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth o X I, aerial photos, previo	/) d Leaves (a (B13) Plants (B1 fide Odor f cospheres Reduced Ir Reduction in urface (C7) dl Data (DS n in Rema (inches): (inches): (inches): ous inspec	(C1) along Livir on (C4) n Plowed S)) rks) ctions), if a	g Roots (C Soils (C6)	Secondary Indicators (mining Surface Soil Cracks Drainage Patterns (B Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed Geomorphic Position FAC-Neutral Test (D Wetland Hydrology Present?	mum of two required) (B6) 310) Table (C2) 8) n Aerial Imag.(C9) Plants (D1) n (D2) 95) Yes <u>X</u> No
Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Ir Sparsely Vegetated Concave Field Observations: Surface Water Present? Water Table Present? Saturation Present? Describe Recorded Data (stream generations) Remarks: The area displayed indicators of the second	of one is required; magery (B7) Surf. (B8) Yes N Yes N Yes N gauge, monitoring wel wetland hydrology.	check all that apply Water-Staine Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Vater-Staine Quatic Fauna True Aquatic Fauna Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth I, aerial photos, previo	(inches): (inches): (inches): (inches):	(C1) along Livir on (C4) n Plowed S)) rks) ettions), if a	g Roots (C Soils (C6)	Secondary Indicators (mining Surface Soil Cracks Drainage Patterns (F Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed Geomorphic Position FAC-Neutral Test (D Wetland Hydrology Present?	mum of two required) (B6) 310) Table (C2) 8) n Aerial Imag.(C9) Plants (D1) n (D2) 95) Yes <u>X</u> No

Project/Site: Gretna Bottoms	City/County:	Sarpy Cour	nty S	Sampling Date:	4/29/20	15	
Applicant/Owner: Lyman-Richey Corporation		State	: NE	Sampling Point:	Ag-17		
Investigators: Ben Fisher Austin Z	gler	Section, Tov	vnship, Range	S 16 T 13N	R 1	10E	
Landform (hillslope, terrace, etc.): Depression		Local Rel	ief (concave, co	onvex, none): C	oncave		
Slope(%): 0 Lat: 41.1007409389447	Long: -96.3063511	1743306	Datum:	NAD 1983			
Soil Map Unit Name:Gibbon-Wann complex, occasionally	y flooded		NWI Classificat	tion: None			
Are climatic / hydrologic conditions on the site typical for this t	ime of year? Yes X	No	(If No, expla	ain in Remarks)			
Are Vegetation <u>X</u> , Soil <u>,</u> Hydrology <u>,</u> signific	cantly disturbed?	Are "Normal	Circumstances"	present? Yes	\$	No	Х
Are Vegetation, Soil, Hydrology, natura	lly problematic?	(If needed,	explain any ans	swers in Remarks	3.)		
SUMMARY OF FINDINGS - Attach a site map	showing sampling po	oint locatio	ns. transect	ts. important	featur	·es. et	c.
Hydrophytic Vegetation Present? Yes No X	<u></u>					,	
Hydric Soil Present? Yes X No	Is the Sampled Are	ea		(N-			
Wetland Hydrology Present? Yes X No			Yes X	K NO			
Remarks:	=						
The area characterized by this data form is a wetland area in	an agricultural field. The are	ea displayed ir	dicators of hydi	ric soil and wetla	nd hydro	logy;	
however, the area failed to meet hydrophytic vegetation crite	ria. Agricultural crops had no	ot been planted	d as of the date	of the field visit.			
	Abaaluta Daminant	Indiantan					
VEGETATION – Use scientific names of plants.	<u>Absolute</u> <u>Dominant</u> <u>% Cover</u> <u>Species</u>	<u>Status</u>	Dominance -	Test Worksheet	:		
			Number of D	ominant Species			
			That Are OB	L, FACW, or FAC):	0	(A)
			Total Numbe	r of Dominant			
			Species Acro	oss all Strata:		0	(B)
			Porcont of D	ominant Spacias			_
			That Are OBL	L, FACW, or FAC	:	0.0%	_(A/B)
			Prevalence I	ndex Workshee			
			Total % (Cover of	 Multi	oly by:	
				0	$\frac{1}{x 1} =$	0	
			FACW specie		x 2 =	0	
			FAC species	0	x 3 =	0	
			FACU specie	es 0	x 4 =	0	
			UPL species	0	x 5 =	0	
			Column Total	0	(A)	0	(B)
			Drovok	is	_`´_		
			Prevale	ence index = D/A	<u> </u>		
			Hydrophytic	Vegetation Indic	ators:		
			Rapid Te	est for Hydrophyti	c Vegeta	ation	
			Dominan	ice Test > 50%			
			Prevalen	ce Index ≤ 3.0			
			Morpholo	ogical Adaptation	s (Provi separate	de supp sheet)	orting
			Problema	atic Hydrophytic	Vegetatio	on (Exp	plain)
			Indicators of be present,	hydric soil and vunless disturbed	vetland h or proble	ydrolog ematic.	jy must
			Hydroph Vegetation P	ytic Present? Yes		No)	x
Remarks: (Include photo numbers here or on a separate she No vegetation was observed.	et.)		<u> </u>				<u> </u>



(inches) Color (m	nist) %	Color (moi	ist) %	Type 1	Loc ²	Texture	Remarks	
(incines)	2/1 09		<u> </u>	<u>- 1390</u>				
Type: C=Concentration, D=D	epletion, RM=R	educed Martix, C	S=Covered or C	Coated S	and Grain	is. ² Location: PL=Pore	e Lining, M=Matrix.	
ydric Soil Indicators:						Indicators for Problem	natic Hydric Soils: ³	
 Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 	(A11)	 Sandy Gley Sandy Redo Stripped Ma Loamy Muci Loamy Gley Depleted Ma Redox Dark Depleted Da Redox Depr 	ed Matrix (S4) bx (S5) atrix (S6) ky Mineral (F1) red Matrix (F2) atrix (F3) : Surface (F6) ark Surface (F7) ressions (F8)			Coast Prairie Redox (Iron-Manganese Mas Dark Surface (S7) Very Shallow Dark Su Other (Explain in Ren Indicators of hydrophy wetland hydrology musi	(A16) (A16)(
5 cm Mucky Peat or Peat (S3) bserved):					disturbed or p	roblematic.	
Туре:						Hydric Soil Present?	Yes X No	_
Depth (inches):								2
emarks: The observed soil profile meets h	ydric soil criteria.							•
temarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum	ydric soil criteria.	ed; check all that a	apply)			Secondary Indicato	ors (minimum of two req	p
temarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1)	ydric soil criteria. ors: of one is require	ed; check all that	apply) Stained Leaves (B	39)		Secondary Indicato	ors (minimum of two requ	
emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2)	ydric soil criteria. ors: of one is require	ed; check all that a	apply) Stained Leaves (B Fauna (B13)	39)		Secondary Indicato	ors (minimum of two requ bil Cracks (B6) Patterns (B10)	ם
emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3)	ydric soil criteria. ors: of one is require	ed; check all that a Water-S Aquatic True Aq	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14))		Secondary Indicato	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2)	ıuired)
emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	ydric soil criteria. ors: of one is require	ed; check all that a Water-S Aquatic True Aqu Hydroge	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14) en Sulfide Odor (C	39)) C1)		Secondary Indicato	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8)	ıuired
emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	ydric soil criteria. ors: of one is require	ed; check all that a Water-S Aquatic True Aq Hydroge Oxidized	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14) en Sulfide Odor (C d Rhizospheres al	39)) C1) Iong Livin	g Roots (C3	Secondary Indicato	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imag.(C9)	2 [uired]
emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	ydric soil criteria. ors: of one is require	ed; check all that a Water-S Aquatic True Aq Hydroge Oxidized Presenc	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14) en Sulfide Odor (C d Rhizospheres al se of Reduced Iror	39)) C1) Iong Living n (C4)	g Roots (C3	Secondary Indicato	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1)	ıuired
emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	ydric soil criteria. ors: of one is require	ed; check all that a Water-S Aquatic True Aq Hydroge Oxidized Presenc Recent I	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14) en Sulfide Odor (C d Rhizospheres al se of Reduced Iror Iron Reduction in	39)) C1) Iong Livin n (C4) Plowed S	g Roots (C3 oils (C6)	Secondary Indicato	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) ic Position (D2)	Juired
emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum 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)	ydric soil criteria. ors: of one is require	ed; check all that a Water-S Aquatic True Aqu Hydroge Oxidized Presenc Recent I Thin Mu	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14) en Sulfide Odor (C d Rhizospheres al re of Reduced Iror Iron Reduction in ick Surface (C7)	39)) C1) long Living n (C4) Plowed S	g Roots (C3 oils (C6)	Secondary Indicato Surface So Drainage F Dry-Seaso Crayfish Bu Saturation Stunted or Geomorph FAC-Neutr	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) ic Position (D2) ral Test (D5)	ıuired
emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum 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 In	ydric soil criteria. ors: of one is require	ed; check all that a Water-S Aquatic True Aqu Hydroge Oxidized Presenc Recent I Thin Mu Gauge o	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14) en Sulfide Odor (C d Rhizospheres al the of Reduced Iror Iron Reduction in the Surface (C7) or Well Data (D9)	39)) C1) Iong Livin; n (C4) Plowed S	g Roots (C3 oils (C6)	Secondary Indicato	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) ic Position (D2) ral Test (D5)	quired)
emarks: The observed soil profile meets h YDROLOGY Yetland Hydrology Indicat Primary Indicators (minimum 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 In Sparsely Vegetated Concave	ydric soil criteria. ors: of one is require nagery (B7) Surf. (B8)	ed; check all that a Water-S Aquatic True Aq Hydroge Oxidized Presenc Recent I Gauge o Other (E	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14) en Sulfide Odor (C d Rhizospheres al te of Reduced Iror Iron Reduction in uck Surface (C7) or Well Data (D9) Explain in Remark	39)) C1) Iong Livin n (C4) Plowed S	g Roots (C3 oils (C6)	Secondary Indicato	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) ic Position (D2) ral Test (D5)	juired
emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum 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 In Sparsely Vegetated Concave ield Observations:	ydric soil criteria. ors: of one is require nagery (B7) Surf. (B8)	ed; check all that a Water-S Aquatic True Aq Hydroge Oxidized Presenc Recent I Thin Mu Gauge o Other (E	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14) en Sulfide Odor (C d Rhizospheres al re of Reduced Iror Iron Reduction in uck Surface (C7) or Well Data (D9) Explain in Remark	39) C1) Iong Living n (C4) Plowed S	g Roots (C3 oils (C6)	Secondary Indicato Surface Sc Drainage F Dry-Seaso Crayfish Bi Saturation Stunted or Geomorph FAC-Neutr	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) ic Position (D2) ral Test (D5)	įuired
emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum 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 Ir Sparsely Vegetated Concave ield Observations: Surface Water Present?	ydric soil criteria. ors: of one is require nagery (B7) Surf. (B8) Yes	ed; check all that a Water-S Aquatic True Aqu Hydroge Oxidized Presenc Recent I Gauge o Other (E	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14) en Sulfide Odor (C d Rhizospheres al re of Reduced Iror Iron Reduction in ick Surface (C7) or Well Data (D9) Explain in Remark	39)) C1) long Living n (C4) Plowed S (s)	g Roots (C3 oils (C6)	Secondary Indicato	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) ic Position (D2) ral Test (D5)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
emarks: The observed soil profile meets h YDROLOGY Yetland Hydrology Indicat Primary Indicators (minimum 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 In Sparsely Vegetated Concave ield Observations: Surface Water Present? Water Table Present?	ydric soil criteria. ors: of one is require nagery (B7) Surf. (B8) Yes Yes	ed; check all that a Water-S Aquatic True Aq Hydroge Oxidized Presenc Recent I Gauge o Other (E	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14) en Sulfide Odor (C d Rhizospheres al e of Reduced Iror Iron Reduction in ick Surface (C7) or Well Data (D9) Explain in Remark	39)) C1) long Living n (C4) Plowed S (s)	g Roots (C3 oils (C6)	Secondary Indicato	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) ic Position (D2) ral Test (D5)	2
emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum 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 In Sparsely Vegetated Concave ield Observations: Surface Water Present? Water Table Present? Saturation Present?	ydric soil criteria.	ed; check all that a Water-S Aquatic True Aquatic Urue Aquatic Oxidized Presenc Recent I Gauge o Other (E No <u>X</u> C No <u>X</u> C	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14) en Sulfide Odor (C d Rhizospheres al te of Reduced Iror Iron Reduction in uck Surface (C7) or Well Data (D9) Explain in Remark Depth (inches): Depth (inches):	89)) C1) long Living n (C4) Plowed S (s)	g Roots (C3 oils (C6)	Secondary Indicato Surface So Drainage F Dry-Seaso Crayfish Br Sturted or ✓ Geomorph FAC-Neutr Wetland Hydrology Pro	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) ic Position (D2) ral Test (D5)	 ıuired)) Νο
emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicat Primary Indicators (minimum 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 In Sparsely Vegetated Concave ield Observations: Surface Water Present? Water Table Present? Saturation Present? escribe Recorded Data (stream section)	ydric soil criteria.	ed; check all that a Water-S Aquatic True Aquatic Urue Aquatic Oxidized Presenc Recent I Chin Mu Gauge o Other (E No <u>X</u> C No <u>X</u> C	apply) Stained Leaves (B Fauna (B13) uatic Plants (B14) en Sulfide Odor (C d Rhizospheres al e of Reduced Iror Iron Reduction in uck Surface (C7) or Well Data (D9) Explain in Remark Depth (inches): Depth (inches): Depth (inches): previous inspectio	39)) C1) Iong Living n (C4) Plowed S (s) (ss)	g Roots (C3 oils (C6)	Secondary Indicato Surface So Dry-Seaso Crayfish Bi Solution Saturation Stunted or Geomorph FAC-Neutr Wetland Hydrology Pro- Wetland Hydrology Pro-	ors (minimum of two requ bil Cracks (B6) Patterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) ic Position (D2) ral Test (D5)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Project/Site: Gretna Bottoms	City/County:	Sarpy Cour	nty	Sampling Date:	4/30/20)15	
Applicant/Owner: Lyman-Richey Corporation		State	: NE	Sampling Point:	Ag-18		
Investigators: Ben Fisher Austin Zi	gler	Section, Tov	vnship, Range	S 16 T 13	N R	10E	
Landform (hillslope, terrace, etc.): Depression		Local Rel	ief (concave, co	onvex, none): (Concave		
Slope(%): 0 Lat: 41.0973623746755	Long: -96.3032074	1337095	Datum:	NAD 1983			
Soil Map Unit Name:Gibbon-Wann complex, occasionally	y flooded		NWI Classificat	tion: None			
Are climatic / hydrologic conditions on the site typical for this t	ime of year? Yes X	No	(If No, expla	ain in Remarks)			
Are Vegetation <u>X</u> , Soil <u>,</u> Hydrology <u>,</u> signific	cantly disturbed?	Are "Normal	Circumstances'	" present? Ye	S	No	Х
Are Vegetation, Soil, Hydrology, natura	lly problematic?	(If needed,	explain any ans	swers in Remark	(S.)		
SUMMARY OF FINDINGS - Attach a site map	showing sampling po	oint locatio	ns. transec	ts. importan	t featu	res. et	c.
Hydrophytic Vegetation Present? Yes No X	<u></u>			,			
Hydric Soil Present? Yes X No	Is the Sampled Are	a		/ N-			
Wetland Hydrology Present? Yes X No			Yes)	(<u>NO</u>			
Remarks:	=						
The area characterized by this data form is a wetland area in	an agricultural field. The are	ea displayed ir	ndicators of hyd	ric soil and wetla	and hydro	ology;	
nowever, the area failed to meet hydrophytic vegetation crite	ria. Agricultural crops had no	ot been planted	d as of the date	of the field visit.			
	Absolute Dominant	Indicator					
VEGETATION – Use scientific names of plants.	<u>% Cover</u> Species	Status	Dominance	Test Workshee	t:		
			Number of D	ominant Specie	S		
			That Are OB	L, FACW, or FA	C:	0	_ (A)
			Total Numbe	r of Dominant			
			Species Acro	oss all Strata:		0	(B)
			Percent of D	ominant Species			
			That Are OB	L, FACW, or FA	C: —	0.0%	_(A/B)
			Prevalence	Index Workshe	et.		
			Total % (Cover of:	Multi	inly hy	
			OBL species	0	$\frac{1}{x 1} =$	0	
			FACW specie	es 0	x 2 =	0	
			FAC species	0	x 3 =	0	
			FACU specie	es 0	x 4 =	0	
			UPL species	0	x 5 =	0	
			Column Toto	0	(A)	0	(B)
			Column Tota	ils	(· ·/		
			Prevale	ence muex = D//	1=		
			Hydrophytic	Vegetation Indi	cators:		
			Rapid Te	est for Hydrophy	ic Vegeta	ation	
			Dominan	nce Test > 50%			
			Prevalen	the lndex ≤ 3.0			
			Morpholo	ogical Adaptation Remarks or on a	ns (Provi separate	ide supp sheet)	orting
			Problema	atic Hydrophytic	Vegetati	on (Ex	plain)
			Indicators of be present,	f hydric soil and unless disturbed	wetland ł I or probl	nydrolog ematic.	jy must
			Hydroph Vegetation F	ytic Present? Yes		No 2	x
Remarks: (Include photo numbers here or on a separate she No vegetation was observed.	et.)		<u> </u>			<u> </u>	<u> </u>



SOIL

Depth (inches) Matrix 0 to 4 10YR 3 / 1 100 4 to 15 10YR 2 / 1 98 7.5 15 to 20 10YR 2 / 1 90 7.5 ¹ Type: C=Concentration, D=Depletion, RM=Reduced Ma	Redox Features or (moist) % Type 1 Loc 5YR 4/6 2 C M 5YR 4/6 10 C M	2 Texture SANDY LOAM SANDY CLAY LOAM	Remarks
(inches) Color (moist) % Color 0 to 4 10YR 3 / 1 100 4 to 15 10YR 2 / 1 98 7.5 15 to 20 10YR 2 / 1 90 7.5 1Type: C=Concentration, D=Depletion, RM=Reduced Ma The second sec	or (moist) <u>%</u> Type ¹ Loc 5YR 4/6 2 C M 5YR 4/6 10 C M	2 Texture SANDY LOAM SANDY CLAY LOAM	Remarks
0 to 4 10YR 3 / 1 100 4 to 15 10YR 2 / 1 98 7.5 15 to 20 10YR 2 / 1 90 7.5 ¹ Type: C=Concentration, D=Depletion, RM=Reduced Ma 10 10 10 10	5YR 4/6 2 C M	SANDY LOAM SANDY CLAY LOAM	
4 to 15 10YR 2 / 1 98 7.5 15 to 20 10YR 2 / 1 90 7.5 ¹ Type: C=Concentration, D=Depletion, RM=Reduced Ma	5YR 4/6 2 C M 5YR 4/6 10 C M	SANDY CLAY LOAM	
15 to 20 10YR 2 / 1 90 7.5 ¹ Type: C=Concentration, D=Depletion, RM=Reduced Ma	5YR 4/6 10 C M		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Ma		SANDY CLAY LOAM	Depletions
	artix, CS=Covered or Coated Sand	Grains. ² Location: PL=Pore Lining,	M=Matrix.
Hydric Soil Indicators: ☐ Histosol (A1) ☐ Sand ☐ Histic Epipedon (A2) ✓ Sand ☐ Black Histic (A3) ☐ Strip ☐ Hydrogen Sulfide (A4) ☐ Loan ☐ Stratified Layers (A5) ☐ Loan ☐ 2 cm Muck (A10) ☐ Depl ☐ Depleted Below Dark Surface (A11) ☐ Redd ☐ Thick Dark Surface (A12) ☐ Depl ☐ Sandy Mucky Mineral (S1) ☐ Redd ☐ 5 cm Mucky Peat or Peat (S3) ☐ ☐ Restrictive Layer (if observed): Type: ☐ Depth (inches):	dy Gleyed Matrix (S4) dy Redox (S5) oped Matrix (S6) my Mucky Mineral (F1) my Gleyed Matrix (F2) leted Matrix (F3) lox Dark Surface (F6) leted Dark Surface (F7) lox Depressions (F8)	Indicators for Problematic Hy Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF Other (Explain in Remarks) ³ Indicators of hydrophytic vegeta wetland hydrology must be prese disturbed or problematic Hydric Soil Present? Y	<u>vdric Soils:</u> ³ ³ ³ ³ ³ ³ ³ ³
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check a	all that apply)	Secondary Indicators (mini	mum of two required)
Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks	(B6)
High Water Table (A2)	Aquatic Fauna (B13)	Drainage Patterns (I	310)
Saturation (A3)	True Aquatic Plants (B14)	Dry-Season Water 1	able (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C	8)
Sediment Deposits (B2)	Oxidized Rhizospheres along Living Roo	ots (C3) Saturation Visible or	n Aerial Imag.(C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or Stressed	Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Plowed Soils (C	C6) Geomorphic Position	n (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	FAC-Neutral Test (D)5)
Inundation Visible on Aerial Imagery (B7)	Gauge or Well Data (D9)		
Sparsely Vegetated Concave Surf. (B8)	Other (Explain in Remarks)		
Field Observations:			
Surface Water Present? Yes No _X	Depth (inches):		
Water Table Present? Yes No _X	Depth (inches):		
Saturation Present? Yes No X	Depth (inches):	Wetland Hydrology Present?	Yes <u>X</u> No
		0:	

Project/Site: Gretna Bottoms	City/County:	Sarpy Cour	nty	Sampling Date	4/30/20)15	
Applicant/Owner: Lyman-Richey Corporation		State	: NE	Sampling Poin	t: Ag-19		
Investigators: Ben Fisher Austin 2	Zigler	Section, Tov	wnship, Range	S 16 T 13	N R	10E	
Landform (hillslope, terrace, etc.): Depression		Local Re	lief (concave, co	onvex, none):	Concave		
Slope(%): 0 Lat: 41.1008416898662	Long: -96.2995595	5246869	Datum:	NAD 1983			
Soil Map Unit Name:Gibbon loamy fine sand, overwash	, occasionally flooded		NWI Classificat	tion: None			
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes X	No	(If No, expla	ain in Remarks)		
Are Vegetation <u>X</u> , Soil <u></u> , Hydrology <u></u> , signif	icantly disturbed?	Are "Normal	Circumstances'	' present? Y	es	No	Х
Are Vegetation, Soil, Hydrology, nature	ally problematic?	(If needed,	explain any ans	swers in Remai	rks.)		
SUMMARY OF FINDINGS - Attach a site map	showing sampling po	oint locatio	ons, transec	ts, importa	nt featu	res, et	c.
Hydrophytic Vegetation Present? Yes No X		_					
Hydric Soil Present? Yes X No	within a Wetland?	a	Yes)	(No			
Wetland Hydrology Present? Yes X No							
Remarks:	L						
The area characterized by this data form is a wetland area in however, the area failed to meet hydrophytic vegetation crit	n an agricultural field. The are eria. Agricultural crops had no	ea displayed ir ot been plante	ndicators of hyd d as of the date	ric soil and wet of the field visi	land hydro t.	ology;	
	.						
VEGETATION Use scientific names of plants	Absolute Dominant	Indicator					
	<u>% Cover</u> Species	<u>Status</u>	Dominance	Test Workshe	et:		
			Number of D That Are OB	ominant Speci L, FACW, or F	es AC:	0	(A)
			Total Numbe	r of Dominant			
			Species Acro	oss all Strata:		0	(B)
			That Are OB	L, FACW, or FA	,s \C:	0.0%	(A/B)
			Prevalence I	ndex Worksh	eet:		
			Total %	Cover of:	Mult	ply by:	
			OBL species	0	x 1 =	0	
			FACW specie	es 0	x 2 =	0	
			FAC species	0	x 3 =	0	
			FACU specie	es 0	x 4 =	0	
			UPL species	0	x 5 =	0	
			Column Tota	ls: 0	(A)	0	(B)
			Prevale	ence Index = B	/A=		
			Hydrophytic	Vegetation Inc	licators:		
			Rapid Te	est for Hydroph	ytic Veget	ation	
			Dominar	ice Test > 50%	, _		
			Prevalen	ce Index ≤ 3.0			
			Morpholo	ogical Adaptatio	ons (Prov	ide supr	oorting
			data in R	emarks or on a	a separate	sheet)	-
			Problem	atic Hydrophyti	c vegetati	on (Exp	plain)
			Indicators of be present,	nydric soil and unless disturbe	i wetland d or probl	nydrolog ematic.	gy must
			Hydroph Vegetation F	ytic Present? Ye	s	No 2	x
Remarks: (Include photo numbers here or on a separate sh	eet.)		1			<u> </u>	



Profile Description: (Describe to th	e depth nee	ded to document	the indi	cator or	confirm t	he absence of Ind	dicators.)		
(inches) Color (moist)	0/_	Color (moist)				Toyture	x	Po	marke
$\frac{(\text{Incres})}{0 \text{ to } 4} = \frac{10 \text{VP}}{3 \text{ / 1}}$		Color (moist)	/0	туре					IIIdIKS
1000000000000000000000000000000000000	65	7.5VP 1/6	5	<u> </u>	M		۸۸	Mixed M	latrix
4 to 18 10VP 4/1	25	7.5YR 4/6	5			SAND		Mixed N	latrix
¹ Type: C=Concentration, D=Depletio	n, RM=Redu	ced Martix, CS=Co	vered or	· Coated S	Sand Grai	ns. 2Locatio	n: PL=Pore Lir	ning, M=Matrix	(.
Hydric Soil Indicators:									- 2
Histosol (A1) Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observ Type: Depth (inches):	[[[[[[[[[[[[[[[[[[[Sandy Gleyed Ma Sandy Redox (S5 Stripped Matrix (S Loamy Mucky Mir Loamy Gleyed Matrix (I Redox Dark Surfa Depleted Dark Surfa Depleted Dark Surfa Redox Depression 	trix (S4)) 66) heral (F1) atrix (F2) F3) ice (F6) irface (F7) ns (F8))		Indicators for Coast Pra Iron-Man Dark Surf Very Sha Other (Ex ³ Indicators wetland hyd dia Hydric Soil Pra	Problemat irie Redox (A16 ganese Masses iace (S7) llow Dark Surfac splain in Remark of hydrophytic \ drology must be sturbed or proble esent?	ic Hydric Sor (F12) (F12) (F12) (S) vegetation and present, unless ematic. Yes X	<u>No</u>
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one	is required; c	check all that apply)			Seconda	ary Indicators	(minimum of ty	wo required
Surface Water (A1)		Water-Stained	Leaves	(B9)			Surface Soil C	racks (B6)	
High Water Table (A2)		Aquatic Fauna	a (B13)				Drainage Patte	erns (B10)	
Saturation (A3)		True Aquatic F	Plants (B1	4)			Dry-Season W	ater Table (C2)	
Water Marks (B1)		Hydrogen Sulf	ide Odor	(C1)			Crayfish Burro	ws (C8)	(0.0)
Sediment Deposits (B2)		Oxidized Rhiz	ospheres	along Livir	ig Roots (C	(3)	Saturation Visi	ble on Aerial Im	ag.(C9)
Drift Deposits (B3)		Presence of R	educed Ir	ron (C4)			Stunted or Stre	essed Plants (D	1)
Algal Mat or Crust (B4)		Recent Iron R	eduction i	n Plowed :	5011S (C6)		Geomorphic P	osition (D2)	
Iron Deposits (B5)			mace (C7) D)			FAC-Neutral 1	est (D5)	
Sparsely Vegetated Concave Surf. (E	8)	Other (Explain	i in Rema	erks)					
Field Observations:									
Surface Water Present? Ye	sN	Depth	(inches):						
Water Table Present? Ye	s No	X Depth	(inches):						
Saturation Present? Ye	s No	Depth	(inches):			Wetland Hyd	irology Prese	nt? Yes	X No
Describe Recorded Data (stream gauge, r	nonitoring well	, aerial photos, previc	ous inspec	ctions), if a	vailable:				
Remarks: The area displayed indicators of wetland	hydrology.								

Project/Site:	Fretna Bottoms			City/Cour	nty:	Sarpy Cour	nty	Sampling	Date:	4/30/20)15	
Applicant/Owner:	Lyman-Riche	ey Corporation				State	: NE	Sampling	Point:	Ag-20		
Investigators:	Ben Fisher		Austin Zigler			Section, Tov	wnship, Range	S 16	T 13N	R	10E	
Landform (hillslope	e, terrace, etc.):	Depress	ion			Local Re	lief (concave, c	onvex, nor	ne): C	oncave		
Slope(%): 0	Lat:	41.098029758	4248	Long:	-96.2986221	310248	Datum:	NAD 1983	3			
Soil Map Unit Nam	ie: Gibbon lo	amy fine sand, o	verwash, occa	asionally floo	oded		NWI Classifica	ation: No	ne			
Are climatic / hydro	ologic conditions	on the site typica	I for this time	of year?	Yes X	No	(If No, exp	lain in Rem	narks)			
Are Vegetation	<u>X</u> , Soil,	Hydrology	_, significantl	y disturbed?	?	Are "Normal	Circumstances	s" present?	Yes		No	Х
Are Vegetation	, Soil,	Hydrology	_, naturally p	roblematic?		(If needed,	explain any an	swers in R	emarks	s.)		
SUMMARY O	F FINDINGS	- Attach a sit	te map sho	owing sa	mpling po	oint locatio	ons, transed	cts, impo	ortant	featu	res, et	c.
Hydrophytic Veg	etation Present?	Yes	No X	v	<u>v</u> .		*					
Hydric Soil Prese	ent?	Yes X	No	Is the S within a	ampled Area	а	Vee	V No				
Wetland Hydrolo	gy Present?	Yes X	No				165					
Remarks:												
The area characte however, the area	erized by this dat a failed to meet h	a form is a wetlar ydrophytic vegeta	nd area in an a ation criteria. <i>I</i>	agricultural Agricultural	field. The are crops had no	ea displayed ir t been plante	ndicators of hyd d as of the date	dric soil and e of the field	d wetlar d visit.	nd hydro	ology;	
VEGETATION	L Use scient	ific names of	plants.	Absolute <u>% Cover</u>	Dominant Species	Indicator Status	Dominance	Test Worl	ksheet:			
							Number of I	Dominant S	Species			
							That Are OF	BL, FACW,	or FAC	: _	0	_ (A)
							Total Numbe Species Acr	er of Domir oss all Stra	nant ata:		0	(B)
							Percent of D That Are OB	Dominant S BL, FACW,	pecies or FAC	: —	0.0%	_(A/B)
							Prevalence	Index Wo	rkshee	t:		
							Total %	Cover of:		 Multi	iply by:	
							OBL species	s	0	x 1 =	0	
							FACW spec	ies	0	x 2 =	0	
							FAC species	s	0	x 3 =	0	
							FACU spec	ies	0	x 4 =	0	
							UPL species	S	0	x 5 =	0	
							Column Tot	ale	0	(A)	0	(B)
							Preva	lence Index	x = B/A	=`´´=		
							Lhudnonhutio	Ne setetie	,,.			
								e vegetatio	n Inaic	ators:	otion	
									50%	c vegeu	allon	
							Domina		50%			
							Morpho		≤ J.U	c (Provi	ido cupr	oorting
							data in I	Remarks of natic Hydro	r on a s	eparate /egetati	sheet) on (Exp	plain)
							Indicators of be present,	of hydric so , unless dis	il and w turbed	vetland h or probl	nydrolog ematic.	jy must
							Hydropl Vegetation	hytic Present?	Yes		No	x
Remarks: (Include No vegetation wa	e photo numbers s observed.	here or on a sep	arate sheet.)									



Profile Description: (Describ	be to the depth ne	eded to document	the ind	icator or	confirm	the absence of Indicators.)	
DepthN	Aatrix	R	edox Fe	atures			
(inches) Color (m	oist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 4 10YR	3/1 100					SANDY LOAM	-
4 to 15 10YR	2/1 98	7.5YR 4/6	2	С	Μ	SANDY CLAY LOAM	-
15 to 18 10YR	2/1 65	7.5YR 4/6	5	С	Μ	SANDY CLAY LOAM	
15 to 18 10YR	5/1 25	7.5YR 4/6	5	С	М	SAND	
¹ Type: C=Concentration, D=D	epletion, RM=Red	uced Martix, CS=Co	overed o	r Coated S	Sand Gra	ins. ² Location: PL=Pore Lining	M=Matrix.
Hydric Soil Indicators:						Indicators for Problematic H	ydric Soils: ³
Histosol (A1)		Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A16)	
Histic Epipedon (A2)		Sandy Redox (S5	5)			Iron-Manganese Masses (F12)
Black Histic (A3)		Stripped Matrix (S	6)				/
Hydrogen Sulfide (A4)		Loamy Mucky Mir	neral (F1)				
Stratified Lavers (A5)			atrix (F2)			Very Shallow Dark Surface (T	F12)
2 cm Muck (A10)			E2)			Other (Explain in Remarks)	
	(0.4.4)		F3)				
	e (ATT)		ace (F6)				
Thick Dark Surface (A12)		Depleted Dark Su	Irface (F7	")		³ Indicators of hydrophytic years	ation and
Sandy Mucky Mineral (S1)		Redox Depression	ns (F8)			wetland hydrology must be pres	ent, unless
5 cm Mucky Peat or Peat (S3	3)					disturbed or problemat	ic.
□ Restrictive Layer (if o	bserved):						
Туре:							
Depth (inches):						Hydric Soil Present?	es X No
HYDROLOGY Wetland Hydrology Indicat	ors:						
Primary Indicators (minimum	of one is required;	check all that apply	')			Secondary Indicators (min	imum of two required)
Surface Water (A1)		Water-Stained	d Leaves	(B9)		Surface Soil Cracks	s (B6)
High Water Table (A2)		Aquatic Fauna	a (B13)	()		Drainage Patterns	B10)
Saturation (A3)		True Aquatic F	Plants (B	14)		Dry-Season Water	Table (C2)
Water Marks (B1)		Hydrogen Sulf	fide Odor	, (C1)		Crayfish Burrows (0	(8)
Sediment Deposits (B2)		Oxidized Rhiz	ospheres	along Livir	ig Roots (C3) Saturation Visible c	n Aerial Imag.(C9)
Drift Deposits (B3)		Presence of R	Reduced I	ron (C4)	0	Stunted or Stressed	Plants (D1)
Algal Mat or Crust (B4)		Recent Iron R	eduction	in Plowed S	Soils (C6)	Geomorphic Positic	n (D2)
Iron Deposits (B5)		Thin Muck Su	Irface (C7	')		FAC-Neutral Test (D5)
Inundation Visible on Aerial I	magery (B7)	Gauge or Wel	ll Data (D	9)			
Sparsely Vegetated Concave	Surf. (B8)	Other (Explain	n in Rema	arks)			
Field Observations:							
Surface Water Present?	Yes N	No X Depth	(inches):				
Water Table Present?	Yes N	No X Depth	(inches):				
Saturation Present?	Yes X N	No Depth	(inches):		2	Wetland Hydrology Present?	Yes <u>X</u> No
Describe Recorded Data (stream	gauge, monitoring we	ell, aerial photos, previo	ous inspe	ctions), if a	vailable:		
Remarks:							
The area displayed indicators of	wetland hydrology.						

Project/Site: Gretna Bottoms	City/C	County:	Sarpy Cour	ity	Sampling Date:	4/30/20	15	
Applicant/Owner: Lyman-Richey Corporation			State	: NE	Sampling Point:	Ag-21		
Investigators: Ben Fisher	Austin Zigler		Section, Tov	vnship, Range	S 9 T 13N	R 1	0E	
Landform (hillslope, terrace, etc.): Depre	ession		Local Rel	ief (concave, co	onvex, none): C	oncave		
Slope(%): 0 Lat: 41.1053495	5007394 Lon	g: <u>-96.2942698</u>	981054	Datum:	NAD 1983			
Soil Map Unit Name: Gibbon loamy fine sand	l, overwash, occasionally	y flooded		NWI Classifica	tion: None			
Are climatic / hydrologic conditions on the site typ	ical for this time of year	? Yes X	No	(If No, expl	ain in Remarks)			
Are Vegetation <u>X</u> , Soil <u></u> , Hydrology _	, significantly distur	bed?	Are "Normal	Circumstances	" present? Yes	·	No	Х
Are Vegetation, Soil, Hydrology _	, naturally problema	itic?	(If needed,	explain any ans	swers in Remarks	s.)		
SUMMARY OF FINDINGS - Attach a	site map showing	sampling po	int locatio	ns, transec	ts, important	featur	es, et	c.
Hydrophytic Vegetation Present? Yes	No X			t	•			
Hydric Soil Present? Yes X	No ls t	he Sampled Area hin a Wetland?	1	Vec				
Wetland Hydrology Present? Yes X	No					_		
Remarks:								
The area characterized by this data form is a we hydrology; however, the area failed to meet hydrology	tland area located in an ophytic vegetation criter	agricultural field. [·] ia. Agricultural cro	The area disp ops had not b	played indicator een planted as	s of hydric soil an of the date of the	d wetlan field visi	id it.	
VEGETATION_ Use scientific names	of plants. <u>Absolution Absolution</u>	ute <u>Dominant</u> ver <u>Species</u>	Indicator Status	Dominance	Test Worksheet			
				Number of D	ominant Species			
				That Are OB	L, FACW, or FAC	;:	0	(A)
				Total Numbe Species Acro	er of Dominant oss all Strata:		0	(B)
				Percent of D That Are OB	ominant Species L, FACW, or FAC	:	0.0%	_(A/B)
				Prevalence	Index Workshee	t:		
				Total %	Cover of:	Multir	oly by:	
				OBL species	0	x 1 =	0	
				FACW speci	es 0	x 2 =	0	
				FAC species	0	x 3 =	0	
				FACU speci	es 0	x 4 =	0	
				UPL species	0	x 5 =	0	
				Column Tota	ıls: 0	(A)	0	(B)
				Preval	ence Index = B/A:	=		
				Hydrophytic	Vegetation Indic	ators:		
				Rapid Te	est for Hvdrophyti	c Vegeta	ition	
				Dominar	the Test $> 50\%$			
				Prevaler	nce Index ≤ 3.0			
				Morphole data in R Problem	ogical Adaptations Remarks or on a s atic Hydrophytic \	s (Provid eparate /egetatic	de supp sheet) on (Exp	orting plain)
				Indicators of be present,	f hydric soil and w unless disturbed	etland h or proble	ydrolog matic.	y must
Demoriles (Include at the surplus to the				Hydroph Vegetation F	nytic Present? Yes		No	K
No vegetation was observed.	separate sneet.)							



Profile Descri	ption: (Des	cribe to the	depth ne	eded to docu	ment the indi	cator or	confirm	the absence of Indicators.)	
Depth (inches)	Color	(moist)	%	Color (mo	ist) %	Type 1	Loc 2	Texture	Remarks
0 to 4	10VR	2/1	100			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
4 to 18	10YR	4/1	95	7.5YR 4/	6 5	<u>с</u>	M	SANDY CLAY LOAM	
¹ Type: C=Con	centration, D	Depletion,	RM=Red	uced Martix, C	S=Covered or	Coated S	Sand Gra	ins. ² Location: PL=Pore Lining,	M=Matrix.
Hydric Soil I	ndicators:							Indicators for Problematic Hy	drie Soils ^{, 3}
Histosol (A ² Histic Epipe Black Histic Hydrogen S Stratified La 2 cm Muck Depleted Be Thick Dark Sandy Mucl 5 cm Mucky	1) edon (A2) c (A3) Sulfide (A4) ayers (A5) (A10) elow Dark Sur Surface (A12) ky Mineral (S1 y Peat or Peat	face (A11)) (S3)		 Sandy Gley Sandy Red Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Dark Depleted D Redox Dep 	ved Matrix (S4) ox (S5) atrix (S6) oxy Mineral (F1) yed Matrix (F2) latrix (F3) oxy Surface (F6) ark Surface (F7) ressions (F8)			Indicators for Problematic Hy Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF Other (Explain in Remarks) Indicators of hydrophytic vegeta wetland hydrology must be prese disturbed or problematic	r <u>dric Soils:</u> 3 12) tion and nt, unless
Restricti Type: Depth (inch Remarks: The observed s	ve Layer (ets hydric soil	d): criteria.					Hydric Soil Present? Yo	es <u>X</u> No
HYDROLOG Wetland Hyd Primary Indica ✓ Surface Wa High Water ✓ Saturation (Water Mark Sediment D Drift Deposi Algal Mat o Iron Deposi Inundation V Sparsely Ve	Y Irology Indi ators (minim tter (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (A3) (A3) (A3	icators: um of one is ial Imagery (B ave Surf. (B8	required; 7)	; check all that Vater-S Aquatic True Aq Hydroge Oxidizer Presenc Recent Thin Mu Gauge Other (f	apply) Stained Leaves (Fauna (B13) Juatic Plants (B1 en Sulfide Odor (d Rhizospheres to of Reduced In Iron Reduction in Juck Surface (C7) or Well Data (DS Explain in Remai	B9) (C1) along Livir on (C4) n Plowed \$) ? ?	ng Roots ((Soils (C6)	Secondary Indicators (minir ✓ Surface Soil Cracks □ Drainage Patterns (E □ Dry-Season Water T □ Crayfish Burrows (Ca C3) ✓ Saturation Visible on □ Stunted or Stressed ✓ Geomorphic Positior □ FAC-Neutral Test (D	num of two required) (B6) 310) able (C2) 8) Aerial Imag.(C9) Plants (D1) n (D2) 5)
Surface Water Water Table I Saturation Pro Describe Record Remarks:	er Present? Present? esent? ded Data (stre	Yes Yes Yes am gauge, mo	X M	No [No _X _ [No [ell, aerial photos,	Depth (inches): Depth (inches): Depth (inches): previous inspec	S S tions), if a	3 urface vailable:	Wetland Hydrology Present?	Yes <u>X</u> No
The area displa	ayed indicators	s of wetland h	ydrology.						

Project/Site: Gretna Botton	IS	City/County:	Sarpy Cour	nty Sa	ampling Date:	4/30/201	15	
Applicant/Owner: Lyman-R	ichey Corporation		State	NE S	ampling Point:	Ag-22		
Investigators: Ben Fisher	Austin Zigler		Section, Tov	vnship, Range	S 9 T 13N	R 1	0E	
Landform (hillslope, terrace, etc	c.): Depression		Local Rel	ief (concave, con	ivex, none): Co	ncave		
Slope(%): 0	Lat: 41.1034999552948	Long: -96.2958967	397959	Datum: N	AD 1983			
Soil Map Unit Name: Gibbo	on loamy fine sand, overwash, occ	asionally flooded		NWI Classificatio	on: None			
Are climatic / hydrologic conditi	ons on the site typical for this time	of year? Yes X	No	(If No, explain	n in Remarks)			
Are Vegetation, Soil	, Hydrology, significant	ly disturbed?	Are "Normal	Circumstances" p	present? Yes		No	Х
Are Vegetation, Soil	, Hydrology, naturally p	oroblematic?	(If needed,	explain any answ	vers in Remarks	.)		
SUMMARY OF FINDIN	GS - Attach a site map she	owing sampling po	oint locatio	ons, transects	s, important	featur	es, et	c.
Hydrophytic Vegetation Prese	ent? Yes No X	• • • •		·	· •			
Hydric Soil Present?	Yes X No	Is the Sampled Are within a Wetland?	а	Yee Y	Na			
Wetland Hydrology Present?	Yes X No					_		
Remarks:								
The area characterized by this hydrology; however, the area	data form is a wetland area locat failed to meet hydrophytic vegetati	ed in an agricultural field. on criteria. Agricultural cr	The area disp ops had not b	blayed indicators een planted as of	of hydric soil and f the date of the	d wetland field visit	d t.	
VEGETATION_ Use sc	entific names of plants.	Absolute Dominant % Cover Species	Indicator Status	Dominance Te	est Worksheet			
				Number of Do	minant Species			
				That Are OBL,	, FACW, or FAC	:	0	(A)
				Total Number of Species Acros	of Dominant s all Strata:		0	(B)
				Percent of Dor That Are OBL,	ninant Species FACW, or FAC:		0.0%	_(A/B)
				Prevalence In	dex Worksheet	:		
				Total % Co	over of:	Multip	ly by:	
				OBL species	0	x 1 =	0	
				FACW species	. 0	x 2 =	0	
				FAC species	0	x 3 =	0	
				FACU species	s <u> </u>	x 4 =	0	
				UPL species	0	x 5 =	0	
				Column Totals	. 0	(A)	0	(B)
				Prevaler	nce Index = B/A=	<u>.</u>		
				Hydrophytic V	egetation Indic	atore		
				Rapid Tes	t for Hydrophytic	Vegeta	tion	
				Napid Tes	a Test > 50%	vegeta		
				Berninand	$e \ln dex < 3.0$			
				Morpholog data in Re Problemat	gical Adaptations marks or on a se ic Hydrophytic V	(Provid eparate s egetatio	de supp sheet) n (Ext	orting
				Indicators of h be present, ur	nydric soil and w nless disturbed o	etland hy or proble	ydrolog matic.	y must
				Hydrophyt Vegetation Pre	tic esent? Yes	۱۱	No	K
Remarks: (Include photo numb No vegetation was observed.	pers here or on a separate sheet.)							



Control Color (moist) % Color (moist) % Type 1 Loc 2 Texture Remarks 10 3 1074 2/1 100	(inchoo) Color (r	IVIALITX	R	edox Fe	atures			
0 0 10 3 10/YR 2/1 100	(incries) Color (n	noist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
a b 14 10YR 3/1 95 7.5YR 4/6 5 C M SAND 4 10YR 6/1 95 7.5YR 4/6 5 C M SAND Type: C-Concentration, D=Depletion, RM=Reduced Maritx, CS=Covered or Ceated Sand Grains. * CLAV LOAM	0 to 3 10YR	2/1 100					SANDY CLAY LOAM	
Id. to 16 10YR 5/1 95 7.5YR 4/6 5 C M CLAY LOAM Internation, D=Depletion, RM=Reduced Matrix, (54) Socation: PL=Pore Lining, M=Matrix. Accation: PL=Pore Lining, M=Matrix. Internation, Marking, CSS=Covered or Coated Sand Grains. Indicators for Problematic Hydric Soils: ³ Coation: PL=Pore Lining, M=Matrix. Internation (A1) Sandy Redox (S5) Indicators for Problematic Hydric Soils: ³ Coate Surface (F12) Black Heitic (A2) Sandy Redox (S5) Depleted Matrix (S4) Coate Surface (F12) Smattle (A4) Deprese Matrix (S4) Depleted Matrix (F2) Depleted Matrix (F2) 2 cm Muck (Atti) Depleted Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F3) Best Heitic (A2) Redox Depresents Sindy Mucky Mineral (S1) Redox Depresents S on Mucky Mineral (S1) Redox Depresents Sinder Mucky Mineral (S1) Redox Depresents S on Mucky Mineral (S1) Redox Depresents Yes X No Primary Indicators (Ininiumu of one is required: check all that apply) Secondary Indicators (minimum of two requirematics: Statustion (A3) Procesence of Reduced in Provee Soils (C6) Saturation (A3) Provee Soils (C2) Secondar	3 to 14 10YR	3/1 95	7.5YR 4/6	5	С	М	SANDY CLAY LOAM	
18 10YR 2/1 85 7.5YR 4/6 5 C M CLAYLDAM Type: C-Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. 3.coation: PL=Pore Lining, M=Matrix. Histoc (1) Sandy Gleyed Martix (54) Indicators for Problematic Hydric Soils: 3 Hestoc (14) Sandy Redox (55) Inch-Marganese Masses (F12) Black Hatic (A) Surput Matrix (Bineral (F1) Dark Surface (F2) 2 cm Muck (A10) Depleted Martix (F3) Dark Surface (F7) 2 for Muck (A11) Depleted Martix (F3) Dark Surface (F7) Smd Muck Mineral (S1) Depleted Martix (F3) Dark Surface (F7) Smd Muck Mineral (S1) Redox Depressions (F8) Indicators of hydrophytic vegetation and wetland hydrology must be present, unlass disturbed or problematic. Smd Muck Mineral (S1) Redox Depressions (F8) Indicators of hydrophytic vegetation and wetland hydrology must be present, unlass disturbed or problematic. YPP:	14 to 16 10YR	5/1 95	7.5YR 4/6	5	С	М	SAND	
Type: C-Concentration, D-Depletion, RM-Reduced Martix, CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix. Histo: Sandy Gleyed Matrix (S4) Coase Parias *Location: PL=Pore Lining, M=Matrix. Histo: Sandy Gleyed Matrix (S5) Coase Parias Rebox (A16) Ion-Manganese Masses (F12) Black Hesic (A3) Simped Matrix (S5) Loarny Mukey Mineral (F1) Vary Shallow Dark Surface (T712) 2 om Muck (A10) Depleted Mexitix (F2) Other (Explain in Remarks) Other (Explain in Remarks) Depleted Beev Dark Surface (A12) Depleted Mexitix (F2) Other (Explain in Remarks) Sondy Mucky Mineral (S1) Redox Depressions (F8) * Indicators of hydrophytic regetation and wetland hydrology must be present. unless disturbed of problematic. Type: Type: Hydric Soil Present? Yes X No Type: The Observed):: Type: Hydric Soil Present? Yes X No Standsci (B1) Check all that apply) Secondary Indicators (inimum of two require marks): Secondary Indicators (inimum of two require marks): YUROLOCY Wetland Hydrology Indicators: Present in Recark Isin Reduction in Plowed Soils (C0) Drainage Parias: Secondary Indicators (inimum of two require marks): Sediment	16 to 18 10YR	2/1 95	7.5YR 4/6	5	C	М	CLAY LOAM	
Hydric Soil Indicators: Indicators for Problematic Hydric Soils: 3 Histic Epipedion (A2) Sandy Redox (S5) Black Histic (A3) Sinpped Matrix (S6) Hydrogen Sulide (A4) Loamy Mucky Mineral (F1) Stratiled Layers (A5) Loamy Mucky Mineral (F2) 2 cm Muck (A10) Depleted Matrix (F2) Depleted Datw Datk Surface (A11) Redox Dark Surface (F7) Stratified Layers (A10) Depleted Datw Surface (F7) Sondy Mucky Mineral (S1) Redox Dark Surface (F7) Sondy Mucky Mineral (S1) Redox Depressions (F8) Hydric Soil Present? Yes X No Xupper Content (A11) Secondary Indicators (minimum of one is required; check all that apply) Hydric Soil Present? Type: The december (A11) Depleted Datw Surface (A12) Depleted Datw Surface (A12) Depleted Datw Surface (M12) Redox Depressions (F8) Startice Water Ca(A12) Depleted Datw Surface (M12) Secondary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Water Marks (B1) Hydroge Matube C(2) Divide Active Datw C(2) Surface Water (A1) Recart Iron Reduction in Plowed Soils (C6)	Type: C=Concentration, D=I	Depletion, RM=Redu	uced Martix, CS=Co	vered o	r Coated S	and Gra	ins. 4.ocation: PL=Pore Lining	g, M=Matrix.
Hataoo (A1) Sardy Gleyed Matrix (S4) Instrume Linux Hataoo (A1) Sardy Gleyed Matrix (S4) Costs Praise Redux (A16) Hatao Sulfade (A2) Sardy Redux (S5) Dark Surface (S7) Hydrogen Sulfade (A4) Costs Praise Redux (A17) Dark Surface (S7) Stripped Matrix (F2) Depleted Matrix (F2) Other (Explain in Remarks) Dopleted Bobo Dark Surface (A12) Depleted Matrix (F2) Other (Explain in Remarks) Sord Mucky Mineral (S1) Redux Dark Surface (F7) * Sord Mucky Mineral (S1) Redux Dark Surface (F7) * Midetard Dark Surface (A12) Depleted Dark Surface (F7) * Midetard Part Post (S3) Redux Dark Surface (F7) * * Sord Mucky Mineral (S1) Redux Dark Surface (F7) * * Type:	Hydric Soil Indicators:						Indicators for Problematic I	Hydric Soils, 3
Inside Epipedon (A2) ↓ Sandy Redox (S5) □ cost Printie Redox (A16) Inside Epipedon (A2) ↓ Sindpred Matrix (S5) □ cost Manganees Massass (F12) Inside Layers (A3) □ costmy Mucky Mineral (F1) □ doarts Surface (A11) □ doarts Surface (A12) Depieted Dark Surface (A11) □ dopleted Matrix (F2) □ Other (Explain in Remarks) Depieted Dark Surface (A12) □ dopleted Matrix (F2) □ Other (Explain in Remarks) Standy Rucky Mineral (S1) □ Redox Dark Surface (F8) * Indicators of hydrophytic vegetation and wetland hydrology must be present, unless daturbed or problematic. Restrictive Layer (if observed): Type:	Histosol (A1)		Sandy Gleyed Ma	trix (S4)				Tyune Sons.
Image: Status Image: Status<	Histic Epipedon (A2)		Sandy Redox (S5)			Coast Prairie Redox (A16)	-)
□ Indica Inside (A) □ Unary Mucky Mineral (T1) □ Dark Surface (T7) □ Stratified Layers (A5) □ Learry Mucky Mineral (T1) □ Very Shallow Dark Surface (TF12) □ Orthor (Explain in Remarks) □ Depleted Dark Surface (T7) □ Orther (Explain in Remarks) □ Depleted Below Dark Surface (A12) □ Depleted Dark Surface (F7) □ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problemate. ■ Sandy Mucky Mineral (S1) □ Redox Depressions (F8) □ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problemate. ■ Thick Dark Surface (A12) □ Depleted Dark Surface (F7) □ Sandy Mucky Mineral (S1) ■ Redox Depressions (F8) ■ Restrictive Layer (If observed): Type:	Black Histic (A2)		Stripped Matrix (S	() (6)			Iron-Manganese Masses (F1	2)
In Ordgeh Sullide (A+) □ Damy Glevy MintBal (-1) □ Very Shallow Dark Surface (TF12) Image: Stratified Layer (A10) □ Depleted Matrix (F3) □ Depleted Matrix (F3) Image: Depleted Below Dark Surface (A11) □ Redox Dark Surface (F7) 3 Indication of hydrophytic vegetation and wetlend hydrology must be present; unless disturbed or problematic. Image: Som Mucky Meral (S1) □ Redox Depressions (F8) 3 Indications of hydrophytic vegetation and wetlend hydrology must be present; unless disturbed or problematic. Image: Som Mucky Meral (S1) □ Redox Depressions (F8) 3 Indications of hydrophytic vegetation and wetlend hydrology must be present; unless disturbed or problematic. Image: Som Mucky Meral (S1) □ Redox Depressions (F8) 4 Hydric Soil Present? Yes_X_No_ Type:				b0)			Dark Surface (S7)	
Stratified Layers (A5) □ camy (Gleyed Matrix (F2) □ Other (Explain in Remarks) □ Depleted Below Dark Surface (A11) □ Redox Dark Surface (F5) □ Thick Dark Surface (A12) □ Depleted Dark Surface (F7) □ Sandy Mucky Mineral (S1) □ Redox Depressions (FB) □ Sondy Mucky Mineral (S1) □ Redox Depressions (FB) □ Sondy Mucky Mineral (S1) □ Redox Depressions (FB) □ Thick Dark Surface (A12) □ Depleted Dark Surface (F7) □ Sondy Mucky Mineral (S1) □ Redox Depressions (FB) □ Their Cay (If observed): □ Type: □ Type: □ Depleted Dark Surface (F7) □ Depleted Dark Surface (F7) □ Depleted Dark Surface (F7) □ Depleted Dark Surface (F7) □ Depleted Dark Surface (F7) <tr< td=""><td> Hydrogen Sulfide (A4)</td><td></td><td>Loamy Mucky Mir</td><td>neral (F1)</td><td></td><td></td><td>Very Shallow Dark Surface (</td><td>TF12)</td></tr<>	Hydrogen Sulfide (A4)		Loamy Mucky Mir	neral (F1)			Very Shallow Dark Surface (TF12)
2 cm Muck (A10) □ pelpted Matrix (F3) □ Chub (Column Humanian) 2 cm Muck (A10) □ Depleted Dark Surface (F7) □ Andicators of hydrophytic vegetation and welland hydrology must be present. unless disturbed or problematic. 3 smdy Mucky Mineral (S1) □ Redox Depressions (F8) □ Indicators of hydrophytic vegetation and welland hydrology must be present. unless disturbed or problematic. • Restrictive Layer (if observed): Type:	Stratified Layers (A5)		Loamy Gleyed Ma	atrix (F2)			Other (Explain in Remarks)	
□ pelpeted Below Dark Surface (A11) □ Pedox Dark Surface (F6) □ Trick Dark Surface (A12) □ Depleted Dark Surface (F7) □ Sandy Mucky Mineral (S1) □ Redox Depressions (F8) □ Som Mucky Peat or Peat (S3) □ Surface Variage (A11) □ Type:	2 cm Muck (A10)		Depleted Matrix (I	F3)				
□ Thick Dark Surface (A12) □<	Depleted Below Dark Surfac	e (A11)	Redox Dark Surfa	ace (F6)				
□ Sandy Mucky Mineral (S1) □ Redox Depressions (F8) □ <t< td=""><td>Thick Dark Surface (A12)</td><td></td><td>Depleted Dark Su</td><td>ırface (F7</td><td>)</td><td></td><td>2</td><td></td></t<>	Thick Dark Surface (A12)		Depleted Dark Su	ırface (F7)		2	
Som Mucky Peat or Peat (S3) Wetland hydrology must be problematic. Som Mucky Peat or Peat (S3) Hydric Soil Present, Unless disturbed or problematic. Type:	Sandy Mucky Mineral (S1)		Redox Depression	ns (F8)			³ Indicators of hydrophytic vege	etation and
Restrictive Layer (if observed): Type: Depth (inches): The observed soil profile meets hydric soil criteria. Hydric Soil Present? Yes X No Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No Secondary Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Sturtace Water (A1) Water Marks (B1) Under Marks (B1) Drif Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Sediment Deposits (B3) Presence of Reduced tron (C4) Alga Mat or Crust (B4) Icon Deposits (B3) Icon Deposits (B3) Cher Present? Yes No Surface Water Present? Yes No Saturation Present? Yes Yes No Saturation Present? Yes No Depth (inches):<	5 cm Mucky Peat or Peat (S	3)		()			disturbed or problema	isent, uniess itic.
Image: Type: Hydric Soil Present? Yes X No Depth (inches): Hydric Soil Present? Yes X No temarks: The observed soil profile meets hydric soil criteria. YDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Secondary Indicators (minimum of two required; check all that apply) Surface Water (A1) Water Stained Leaves (B9) Secondary Indicators (minimum of two required; check all that apply) Surface Water (A1) Water Araks (B1) Drainage Patterns (B10) Dy:Season Water Table (A2) Aquatic Flauna (B13) Dry-Season Water Table (C2) Saturation (A3) Crue Aquatic Plants (B14) Dry-Season Water Table (C2) Staturation (X3) Presence of Reduced Iron (C4) Saturation visible on Aerial Image, (C9) Saturation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Saturation (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Iron Deposits (B8) Other (Explain in Remarks) Wetland Hydrology Present? Yes X_ No Saturation Present? Yes No		o)						
Iype:	- Restrictive Layer (if o	observed):						
Dept (inches):	Type:						Hydric Soil Present?	Yes X No
ternarks: The observed soil profile meets hydric soil criteria. YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required; check all that apply) Surface Water (A1) Quastic Fauna (B13) High Water Table (A2) Quastic Fauna (B13) Saturation (A3) True Aquatic Plants (B14) Orifi Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Drifi Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Iron Deposits (B5) Thin Muck Surface (C7) Surface Surface Surf. (B8) Other (Explain in Remarks) Vided Observations: Surface Vater Present? Surface Present? Yes No X Depth (inches): Water Table Present? Yes Yes No X Depth (inches): Wetland Hydrology Present? Yes								
Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Cield Observations: Surface Water Present? Yes Yes No X Depth (inches): Saturation Present? Yes Yes No X Depth (inches): Saturation Present? Yes Yes No X Depth (inches): Depscribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: The area displayed indicators of wetland hydrology	YDROLOGY							
Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) `ield Observations: Surface Water Present? Yes Yes No X Depth (inches): Saturation Present? Yes Yes No X Depth (inches): Secribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	YDROLOGY Vetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	tors: n of one is required;	check all that apply U Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhiz) d Leaves a (B13) Plants (B4 Plants (B4)) Plants (B4 Plants (B4 Plants (B4)) Plants (B4 Plants (B4 Plants (B4)) Plants (B4 Plants (B4)) Plants (B4) Plants ((B9) 14) (C1) along Living	g Roots (G	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Saturation Visible	nimum of two require (s (B6) (B10) r Table (C2) (C8) on Aerial Imag.(C9)
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Strface Water Present? Yes Yes No X Depth (inches): Saturation Present? Yes Yes No X Depth (inches): Wetland Hydrology Present? Yes No Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches): Preserve a lisplayed indicators of wetland hydrology	YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	tors: n of one is required;	check all that apply U Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhiz) d Leaves a (B13) Plants (B1 ride Odor ospheres leduced li	(B9) (4) (C1) along Living ron (C4)	Roots ((Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse	nimum of two requir (s (B6) (B10) r Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1)
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Surface Water Present? Yes No X Depth (inches):	YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	tors: n of one is required;	check all that apply U Water-Stained Aquatic Fauna True Aquatic Fauna Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R) d Leaves a (B13) Plants (B fide Odor ospheres teduced li eduction	(B9) (C1) along Living ron (C4) in Plowed St) Roots (C bils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi	nimum of two require (B10) (Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) ion (D2)
Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Surface Water Present? Yes No _X Depth (inches): Water Table Present? Yes No _X Depth (inches): Saturation Present? Yes No _X Depth (inches): Saturation Present? Yes No _X Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: The area displayed indicators of wetland hydrology.	YDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum 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)	tors: n of one is required;	check all that apply U Water-Stained Aquatic Fauna True Aquatic Fauna U True Aquatic Fauna U Oxidized Rhizi Presence of R Recent Iron R Thin Muck Su) d Leaves a (B13) Plants (B iide Odor ospheres reduced li eduction rface (C7	(B9) (C1) along Living ron (C4) in Plowed So	g Roots (C	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi FAC-Neutral Test	nimum of two require (B10) (B10) r Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) ion (D2) (D5)
Siteld Observations: Surface Water Present? Yes No X Depth (inches):	YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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	tors: n of one is required; Imagery (B7)	check all that apply U Water-Stained Aquatic Fauna True Aquatic Fauna U True Aquatic Fauna U Oxidized Rhiz U Presence of R Recent Iron R U Thin Muck Su Gauge or Wel) d Leaves a (B13) Plants (B4 ide Odor ospheres teduced li eduction rface (C7 II Data (D	(B9) (C1) along Living ron (C4) in Plowed So) 9)) Roots (C bils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi FAC-Neutral Test	nimum of two require (s (B6) (B10) r Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) ion (D2) (D5)
Surface Water Present? Yes No X Depth (inches):	YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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 Sparsely Vegetated Concave	tors: n of one is required; lmagery (B7) e Surf. (B8)	check all that apply U Water-Stained Aquatic Fauna True Aquatic Fauna Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron R Thin Muck Su Gauge or Wel Other (Explain) d Leaves a (B13) Plants (B4 fide Odor ospheres Reduced II eduction rface (C7 II Data (D n in Rema	(B9) (C1) along Living ron (C4) in Plowed So) 9) arks)	g Roots ((pils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi FAC-Neutral Test	nimum of two require (s (B6) (B10) r Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) ion (D2) (D5)
Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: The area displayed indicators of wetland hydrology No	YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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 Sparsely Vegetated Concav	tors: n of one is required; Imagery (B7) e Surf. (B8)	check all that apply U Water-Stained Aquatic Fauna True Aquatic Fauna U True Aquatic Fauna Oxidized Rhizi Presence of R Recent Iron R Thin Muck Su Gauge or Wel Other (Explain) d Leaves a (B13) Plants (B4 fide Odor ospheres teduced II eduction rface (C7 II Data (D n in Rema	(B9) (C1) along Living ron (C4) in Plowed So) 9) arks)) Roots (C bils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi FAC-Neutral Test	nimum of two require (s (B6) (B10) (Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) ion (D2) (D5)
Saturation Present / Yes No _X Depth (inches): Wetallic Hydrology Fresent ? Tes _A No Depth (inches): Wetallic Hydrology Fresent ? Tes _A No Depth (inches): Wetallic Hydrology Fresent ? Tes _A No No Remarks:	TYDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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 Sparsely Vegetated Concav Field Observations: Surface Water Present?	tors: n of one is required; Imagery (B7) e Surf. (B8) Yes N	check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Oxidized Rhize Presence of R Recent Iron R Thin Muck Su Gauge or Wel Other (Explain) d Leaves a (B13) Plants (B7 fide Odor ospheres leducetion rface (C7 Il Data (D n in Rema (inches):	(B9) (C1) along Living ron (C4) in Plowed So) 9) urks)	J Roots (C bils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi FAC-Neutral Test	nimum of two require (s (B6) (B10) r Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) ion (D2) (D5)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: The area displayed indicators of wetland hydrology	YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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 Sparsely Vegetated Concav Field Observations: Surface Water Present? Water Table Present?	tors: n of one is required; Imagery (B7) e Surf. (B8) Yes N Yes N	check all that apply Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Thin Muck Su Other (Explain Other (Explain Net Supertifier X Depth X Depth) d Leaves a (B13) Plants (B1 fide Odor ospheres leduced li eduction rface (C7 ll Data (D n in Rema (inches): (inches):	(B9) (C1) along Living ron (C4) in Plowed So) 9) srks)	g Roots (G	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi FAC-Neutral Test	nimum of two require (s (B6) (B10) (Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) ion (D2) (D5)
Remarks: The area displayed indicators of wetland hydrology	YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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 Sparsely Vegetated Concav Field Observations: Surface Water Present? Water Table Present? Saturation Present?	tors: n of one is required; Imagery (B7) e Surf. (B8) Yes N Yes N Yes N	check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Oxidized Rhize Presence of R Recent Iron R Thin Muck Su Other (Explain o X Depth o X Depth) d Leaves a (B13) Plants (B4 ide Odor ospheres leduced li eduction rface (C7 Il Data (D n in Rema (inches): (inches):	(B9) (C1) along Living ron (C4) in Plowed So) 9) srks)	g Roots ((nimum of two requires (s (B6) (B10) r Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) ion (D2) (D5)
Remarks: The area displayed indicators of wetland hydrology	YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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 Sparsely Vegetated Concav Field Observations: Surface Water Present? Water Table Present? Saturation Present? Describe Recorded Data (stream	tors: n of one is required; Imagery (B7) e Surf. (B8) Yes N Yes N Yes N Yes N gauge, monitoring we	check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Oxidized Rhizi Presence of R Recent Iron R Thin Muck Su Gauge or Wel Other (Explain No X Depth I, aerial photos, previo) d Leaves a (B13) Plants (B fide Odor ospheres leduced li eduction rface (C7 Il Data (D n in Rema (inches): (inches): (inches): (inches): pus insper	(B9) (C1) along Living ron (C4) in Plowed So) 9) urks) 	g Roots (C bils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi FAC-Neutral Test Wetland Hydrology Present?	nimum of two require (B10) (B10) r Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) ion (D2) (D5) Yes X No.
The area displayed indicators of wetland hydrology	YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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 Sparsely Vegetated Concave Field Observations: Sutrace Water Present? Water Table Present? Saturation Present? Describe Recorded Data (stream	tors: n of one is required; Imagery (B7) e Surf. (B8) Yes N Yes N Yes N gauge, monitoring we	check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Oxidized Rhiz Presence of R Recent Iron R Thin Muck Su Gauge or Wel Other (Explain No X Depth X Depth I, aerial photos, previo) d Leaves a (B13) Plants (B fide Odor ospheres teduced li eduction rface (C7 Il Data (D n in Rema (inches): (inches): (inches): (inches):	(B9) (C1) along Living ron (C4) in Plowed So) 9) srks) 	g Roots (C bils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi FAC-Neutral Test Wetland Hydrology Present?	nimum of two require (s (B6) (B10) r Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) ion (D2) (D5) Yes _X_ No.
	TYDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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 Sparsely Vegetated Concave Field Observations: Sutrace Water Present? Water Table Present? Describe Recorded Data (stream	tors: n of one is required; Imagery (B7) e Surf. (B8) Yes N Yes N Yes N gauge, monitoring we	check all that apply Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhiz Presence of R Recent Iron R Thin Muck Su Gauge or Wel Other (Explain No X Depth X Depth I, aerial photos, previo) d Leaves a (B13) Plants (B4 fide Odor ospheres teduced II eduction rface (C7 II Data (D n in Rema (inches): (inches): (inches): (inches):	(B9) (C1) along Living ron (C4) in Plowed So) 9) urks) ctions), if ava	g Roots (C bils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi FAC-Neutral Test Wetland Hydrology Present?	nimum of two require (s (B6) (B10) r Table (C2) (C8) on Aerial Imag.(C9) ad Plants (D1) ion (D2) (D5)
	TyDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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 Sparsely Vegetated Concav Field Observations: Sutface Water Present? Water Table Present? Describe Recorded Data (stream Remarks: The area displayed indicators of	tors: n of one is required; Imagery (B7) e Surf. (B8) Yes N Yes N Yes N gauge, monitoring we	check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Oxidized Rhiz Presence of R Recent Iron R Thin Muck Su Other (Explain No X Depth X Depth X Depth X Depth) d Leaves a (B13) Plants (B4 fide Odor ospheres leduced li eduction rface (C7 ll Data (D n in Rema (inches): (inches): (inches): ous inspec	(B9) (C1) along Living ron (C4) in Plowed So) 9) irks) 	g Roots ((pils (C6)		nimum of two require (s (B6) (B10) r Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) ion (D2) (D5)
	YDROLOGY Wetland Hydrology Indica Primary Indicators (minimum 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 Sparsely Vegetated Concave Field Observations: Sutface Water Present? Water Table Present? Saturation Present? Describe Recorded Data (stream Remarks: The area displayed indicators of	tors: n of one is required; Imagery (B7) e Surf. (B8) Yes N Yes N Yes N gauge, monitoring we	check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Oxidized Rhiz Presence of R Recent Iron R Thin Muck Su Gauge or Wel Other (Explain No X Depth In aerial photos, previous) d Leaves a (B13) Plants (B fide Odor ospheres leduced li eduction rface (C7 Il Data (D n in Rema (inches): (inches): bus inspec	(B9) (C1) along Living ron (C4) in Plowed So) 9) arks) 	g Roots ((pils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (Saturation Visible Stunted or Stresse Geomorphic Positi FAC-Neutral Test Wetland Hydrology Present?	nimum of two require (s (B6) (B10) r Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) ion (D2) (D5)

Project/Site:	Gretna Bottoms			City/Cour	nty:	Sarpy Cour	nty	Sampling Da	ate: 4	/30/20	15	
Applicant/Owner:	Lyman-Riche	y Corporation				State	E NE	Sampling P	oint:	Ag-23		
Investigators:	Ben Fisher		Austin Zigler			Section, Tov	wnship, Range	S 9 T	13N	R 1	0E	
Landform (hillslop	pe, terrace, etc.):	Depress	ion			Local Re	lief (concave, c	onvex, none)): <u>Cor</u>	ncave		
Slope(%): 0	Lat:	41.103650821	7579	Long:	-96.2974816	6357999	Datum:	NAD 1983				
Soil Map Unit Na	me: Gibbon lo	amy fine sand, o	verwash, occa	asionally flo	oded		NWI Classifica	ation: None	÷			
Are climatic / hyd	Irologic conditions	on the site typica	al for this time	of year?	Yes X	No	(If No, exp	lain in Rema	rks)			
Are Vegetation	<u>X</u> , Soil,	Hydrology	_, significantl	y disturbed	?	Are "Normal	Circumstances	" present?	Yes		No	Х
Are Vegetation	, Soil,	Hydrology	_, naturally p	roblematic?		(If needed,	explain any an	swers in Rer	marks.)			
SUMMARY	OF FINDINGS	- Attach a si	te map sho	owing sa	mpling po	oint locatio	ons, transed	ts, impor	tant f	eatur	es, et	c.
Hydrophytic Ve	getation Present?	Yes	No X				*					
Hydric Soil Pres	sent?	Yes X	No	Is the S within a	Sampled Are a Wetland?	a	Vec	V No				
Wetland Hydrol	ogy Present?	Yes X	No				165	<u> </u>		-		
Remarks:												
The area charac however, the are	cterized by this data ea failed to meet hy	a form is a wetla ydrophytic veget	nd area in an a ation criteria.	agricultural Agricultural	field. The are crops had no	ea displayed ir ot been plante	ndicators of hyd d as of the date	dric soil and ve of the field v	<i>w</i> etland visit.	l hydro	logy;	
VEGETATIO	N_ Use scient	ific names of	plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominance	Test Works	sheet:			
							Number of I That Are OE	Dominant Sp 3L, FACW, o	ecies or FAC:		0	(A)
							Total Numbe	er of Domina	nt		0	
							Species Acr	oss all Strata	1:		0	(B)
							Percent of D That Are OB	ominant Spe L, FACW, or	ecies r FAC:		0.0%	_(A/B)
							Prevalence	Index Work	sheet:			
							Total %	Cover of:		Multip	oly by:	
							OBL species	6	0	x 1 =	0	
							FACW speci	ies	0	x 2 =	0	
							FAC species	6	0	x 3 =	0	
							FACU spec	ies	0	x 4 =	0	
							UPL species	s	0	x 5 =	0	
							Column Tota	als:	0 ((A)	0	(B)
							Preval	lence Index =	= B/A=			
							Hydrophytic	Vegetation	Indica	tors:		
							Rapid T	est for Hydro	ophytic	Vegeta	ition	
							Domina	nce Test > 5	0%			
							Prevaler	nce Index ≤ 3	3.0			
							Morphol data in F Problem	logical Adapt Remarks or c natic Hydroph	ations on a sep nytic Ve	(Provie parate egetatio	de supp sheet) on (Exp	orting plain)
							Indicators of be present,	of hydric soil a unless distu	and we	tland h proble	ydrolog matic.	y must
							Hydroph Vegetation	nytic Present?	Yes		No	K
Remarks: (Inclue No vegetation w	de photo numbers vas observed.	nere or on a sep	arate sheet.)									



Profile Descr	ription: (Des	cribe to the	depth ne	eded to docum	ent the indi	cator or	confirm	the absence of Indicators.)	
Depth (inches)	Color	(moist)	%	Color (mois	t) %	Type 1	Loc ²	Texture	Remarks
0 to 4	10YR	2/1	100		<u> </u>			SANDY LOAM	
4 to 18	10YR	2/1	95	7.5YR 4/6	5	С	М	SANDY CLAY LOAM	
¹ Type: C=Cor	ncentration, D	=Depletion,	RM=Redu	uced Martix, CS	=Covered or	Coated S	Sand Gra	ins. ² Location: PL=Pore Lining,	M=Matrix.
Hydric Soil I Histosol (A Histic Epip Black Histi Hydrogen Stratified L 2 cm Muck Depleted E Thick Dark Sandy Muc 5 cm Muck Dept to incl Type: Depth (incl Remarks: The observed	Indicators: Indicators: (1) redon (A2) c (A3) Sulfide (A4) ayers (A5) (A10) Below Dark Sur Surface (A12) cky Mineral (S1 (Y) Peat or Peat ive Layer (hes): Soil profile meet	face (A11) (S3) (S3) (S3) (S3) (S3) (S3)	d):	Jaced Martix, CS Sandy Gleyer ✓ Sandy Redox Stripped Matrix Loamy Mucky Loamy Gleyer Depleted Matrix Redox Dark S Depleted Dark Redox Depres	=Covered or d Matrix (S4) (S5) rix (S6) y Mineral (F1) d Matrix (F2) trix (F3) Surface (F6) rk Surface (F7) rssions (F8)	Coated		Ins. 4Location: PL=Pore Lining, Indicators for Problematic Hi Coast Prairie Redox (A16) Coast Prairie Redox (A16) Dark Surface (S7) Very Shallow Dark Surface (TF Other (Explain in Remarks) Indicators of hydrophytic veget: wetland hydrology must be prese disturbed or problemati	M=Matrix. <u>vdric Soils:</u> ³ ² (12) ² (12) ² (12) ² (12) ² (12) ³ ³ ³ ³ ³ ³ ³ ³
HYDROLOG Wetland Hyd Primary India Surface W High Wate Saturation Water Mar Sediment I Drift Depos Algal Mat o Iron Depos Inundation Sparsely V	GY drology Indi cators (minim ater (A1) r Table (A2) (A3) ks (B1) Deposits (B2) sits (B3) or Crust (B4) sits (B5) Visible on Aer 'eqetated Cond	icators: um of one is ial Imagery (B	required;	check all that a Water-Sta Aquatic F Aquatic F Hydrogen Oxidized Presence Recent Ind Gauge or Other (E)	pply) ained Leaves (auna (B13) atic Plants (B1 Sulfide Odor (Rhizospheres of Reduced Ir on Reduction in k Surface (C7) Well Data (Ds colain in Rema	B9) (C1) along Livir on (C4) n Plowed S)))	ig Roots ((Soils (C6)	Secondary Indicators (mini Surface Soil Cracks Drainage Patterns (1 Dry-Season Water T Crayfish Burrows (C Saturation Visible or Stunted or Stressed Geomorphic Positio FAC-Neutral Test (D	mum of two required) (B6) 310) ^T able (C2) 8) n Aerial Imag.(C9) Plants (D1) n (D2) D5)
Field Observ Surface Wat Water Table Saturation P Describe Recor	vations: er Present? Present? resent? rded Data (stre	Yes Yes Yes am gauge, mo	N N N onitoring we	lo <u>X</u> De lo <u>X</u> De lo De ll, aerial photos, p	epth (inches): epth (inches): epth (inches): revious inspec	 tions), if a	0 vailable:	Wetland Hydrology Present?	Yes X No
Remarks: The area displ	layed indicators	s of wetland h	ydrology.						

Project/Site:	Gretna Bottoms		City/Cour	nty:	Sarpy Cour	nty S	Sampling Date:	4/30/202	15	
Applicant/Owner:	Lyman-Riche	y Corporation			State	NE S	Sampling Point:	Ag-24		
Investigators:	Ben Fisher	Austin Zigle	er		Section, Tov	wnship, Range	S 4 T 13N	R 1	0E	
Landform (hillslop	pe, terrace, etc.):	Depression			Local Rel	lief (concave, co	nvex, none): Co	oncave		
Slope(%): 0	Lat:	41.1180714919469	Long:	-96.30525748	81193	Datum:	VAD 1983			
Soil Map Unit Na	me: Gibbon loa	amy fine sand, overwash, oc	casionally flo	oded		NWI Classificat	ion: None			
Are climatic / hyd	Irologic conditions	on the site typical for this time	e of year?	Yes X	No	(If No, expla	ain in Remarks)			
Are Vegetation	, Soil,	Hydrology, significan	tly disturbed	? /	Are "Normal	Circumstances"	present? Yes	Х	No	
Are Vegetation	, Soil,	Hydrology, naturally	problematic?		(If needed,	explain any ans	wers in Remarks	.)		
SUMMARY		- Attach a site map sh	owing sa	mplina poi	nt locatio	ons. transect	s. important	featur	es. et	c.
Hydrophytic Ve	getation Present?	Yes X No					<u>-,</u>		<u>,</u>	
Hydric Soil Pres	sent?	Yes X No	Is the S	Sampled Area		Х Х	NI-			
Wetland Hydrol	ogy Present?	Yes X No	within			Yes X	NO	_		
Remarks:										
The area charac wetland hydrolo	cterized by this data gy. Agricultural cro	a form is a wetland area in ar ps had not been planted as c	agricultural of the date of	field. The area the field visit.	displayed ir	ndicators of hydr	ophytic vegetatio	n, hydric	; soils, a	and
		····	Absolute	Dominant	Indicator					
VEGETATIO	N - Use scienti	ific names of plants.	% Cover	Species	Status	Dominance 1	Fest Worksheet:			
Tree Stratum						Number of D	ominant Species		2	(A)
Shrub Stratur	<u>n</u>					That Are OBI	_, FACW, or FAC	:	2	_ (A)
Herb Stratum	(Plot size	e: <u>6 Ft</u>)				Total Number	of Dominant			
Bidens vu	Ilgata	·	5	Y	FACW	Species Acro	ss all Strata:		2	(B)
Rumex al	tissimus		5	Y	FACW	Percent of Do	minant Species	4		(A / D)
			10	=Total Cover		That Are OBL	, FACW, or FAC	:	00.0%	_ (A/D)
Vine Stratum	_					Prevalence l	ndex Worksheet	:		
						Total % C	Cover of:	Multip	oly by:	
						OBL species	0	x 1 =	0	
						FACW specie	es 10	x 2 =	20	
						FAC species	0	x 3 =	0	
						FACU specie	es0	x 4 =	0	
						UPL species	0	x 5 =	0	
						Column Total	s: 10	(A)	20	(B)
						Prevale	ence Index = B/A=	=	2.00	
						Hydrophytic	Vegetation Indic	atore		
						X Rapid Te	st for Hydrophytic		tion	
							c_0 Test > 50%	, vegeta	lion	
							$ce \ln dex < 3.0$			
						Morpholo	cical Adaptation		da sunn	ortina
						data in R Problema	emarks or on a seatic Hydrophytic \	eparate : /egetatic	sheet) sheet)	plain)
						Indicators of be present, u	hydric soil and w unless disturbed	etland h	ydrolog matic.	y must
						Hydroph Vegetation P	ytic resent? Yes	X I	No	
Remarks: (Inclue	de photo numbers	here or on a separate sheet.))							

The area displayed dominant hydrophytic vegetation.



Depth Matrix		R	edox Fe	atures			
(inches) Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
to 14 10YR 3/2	85	7.5YR 4/6	5	C	М	SANDY LOAM	Mixed Matrix
to 14 10YR 4/1	10					SAND	Mixed Matrix
4 to 18 10YR 2/1	98	7.5YR 4/6	2	С	М	SANDY CLAY LOAM	
ype: C=Concentration, D=Depletion	on, RM=Redu	iced Martix, CS=Co	overed or	r Coated	Sand Grai	ns. ² Location: PL=Pore L	ining, M=Matrix.
ydric Soil Indicators:						Indicators for Problema	tic Hydric Soils: 3
Histosol (A1)		Sandy Gleyed Ma	atrix (S4)				tie frydrie Sons.
Histic Epipedon (A2)]	Sandy Redox (SF	5)			Coast Prairie Redox (A1	6)
Black Histic (A3)	[Stripped Matrix (S	56)			Iron-Manganese Masses	s (F12)
Hydrogen Sulfide (A4)	[neral (E1)			Dark Surface (S7)	
	ĺ		ricial (F2)			Very Shallow Dark Surfa	ce (TF12)
	l					Other (Explain in Remar	ks)
	l	Depleted Matrix ((F3)				
」 Depleted Below Dark Surface (A11)	l	Redox Dark Surfa 	ace (F6)				
J Thick Dark Surface (A12)	l	Depleted Dark Su	urface (F7)		3 Indicators of hydrophytic	vegetation and
Sandy Mucky Mineral (S1)	[Redox Depressio	ons (F8)			wetland hydrology must be	e present, unless
5 cm Mucky Peat or Peat (S3)						disturbed or prob	lematic.
Bestrictive Layer (if observ	/ed):						
Turno:							Vec V Ne
туре.							
Depth (inches):	oil criteria.					Hydric Soil Present?	
Depth (inches): marks: The observed soil profile meets hydric s YDROLOGY Vetland Hydrology Indicators:	oil criteria.					Hydric Soil Present?	
Depth (inches): marks: he observed soil profile meets hydric s //DROLOGY //etland Hydrology Indicators: trimary Indicators (minimum of one	oil criteria.	check all that apply	/)			Hydric Soil Present?	(minimum of two require
Depth (inches): marks: he observed soil profile meets hydric s CDROLOGY Vetland Hydrology Indicators: rimary Indicators (minimum of one Surface Water (A1)	oil criteria.	check all that apply	y) d Leaves	(B9)		Hydric Soil Present?	(minimum of two require Cracks (B6)
Type.	oil criteria.	check all that apply	/) d Leaves a (B13)	(B9)		Hydric Soil Present? Secondary Indicators Surface Soil O Drainage Patt	(minimum of two require Cracks (B6) erns (B10)
Type.	oil criteria.	check all that apply	/) d Leaves a (B13) Plants (B1	(B9) 14)		Hydric Soil Present?	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2)
Depth (inches): pmarks: 'he observed soil profile meets hydric s WDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	oil criteria.	check all that apply Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul	/) d Leaves a (B13) Plants (B1 fíde Odor	(B9) 14) (C1)			(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) ows (C8)
Depth (inches): marks: he observed soil profile meets hydric s //DROLOGY //etland Hydrology Indicators: trimary Indicators (minimum of one] Surface Water (A1)] High Water Table (A2)] Saturation (A3)] Water Marks (B1)] Sediment Deposits (B2) Deither State (B2)	oil criteria.	check all that apply Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz	/) d Leaves a (B13) Plants (B1 fide Odor rospheres	(B9) (A) (C1) along Livir	ng Roots (C	Hydric Soil Present? Secondary Indicators Surface Soil C Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Crayfish Burro Crayf	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imag.(C9)
Type.	oil criteria.	check all that apply U Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F	/) d Leaves a (B13) Plants (B1 fide Odor cospheres Reduced In	(B9) (C1) along Livir ron (C4)	ng Roots (Cf	Hydric Soil Present? Secondary Indicators Surface Soil O Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Sti	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) ows (C8) sible on Aerial Imag.(C9) ressed Plants (D1)
Type. Depth (inches): emarks: 'he observed soil profile meets hydric s WDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	oil criteria.	check all that apply U Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R	/) d Leaves a (B13) Plants (B1 fide Odor cospheres Reduced II Reduction i	(B9) (C1) along Livir ron (C4) in Plowed S	ng Roots (C Soils (C6)	Hydric Soil Present? Secondary Indicators Surface Soil O Drainage Patt Dry-Season V Crayfish Burro Stunted or Str Stanted or Str Geomorphic F Y FAC-Neutral	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) ows (C8) iible on Aerial Imag.(C9) ressed Plants (D1) Position (D2) Freet (D5)
Type. Depth (inches): marks: he observed soil profile meets hydric s //DROLOGY //dtland Hydrology Indicators: rimary Indicators (minimum of one 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) Injunctation Visible on Aerial Imageny	oil criteria.	check all that apply Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su	y) d Leaves a (B13) Plants (B1 fide Odor cospheres Reduced In Reduction i urface (C7	(B9) (C1) along Livir ron (C4) in Plowed S)	ng Roots (C Soils (C6)	Hydric Soil Present? Secondary Indicators Surface Soil O Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Stu Geomorphic F V FAC-Neutral	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imag.(C9) ressed Plants (D1) Position (D2) Fest (D5)
Type. Depth (inches): marks: he observed soil profile meets hydric s //DROLOGY //dtable/relations //dtable/relations //marks: he observed soil profile meets hydric s //dtable/relations //dtab	(B7) (B7)	check all that apply U Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain	/) d Leaves a (B13) Plants (B1 lfide Odor cospheres Reduced In Reduction i urface (C7 ell Data (D n in Rema	(B9) (C1) along Livir ron (C4) in Plowed \$) 9) arks)	ng Roots (C Soils (C6)	Hydric Soil Present?	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) ows (C8) sible on Aerial Imag.(C9) ressed Plants (D1) Position (D2) Fest (D5)
Depth (inches): Depth (inches): gmarks: he observed soil profile meets hydric s //DROLOGY //dtland Hydrology Indicators: rimary Indicators (minimum of one 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 Sparsely Vegetated Concave Surf. (eld Observations:	(B7) (B7) (B8)	check all that apply Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain	/) d Leaves a (B13) Plants (B1 fide Odor cospheres Reduced II Reduction i urface (C7 ell Data (D n in Rema	(B9) (C1) along Livir ron (C4) in Plowed S) 9) arks)	ng Roots (C Soils (C6)	Hydric Soil Present? Secondary Indicators Surface Soil Q Drainage Patt Dry-Season V Crayfish Burro Saturation Vis Stunted or Stu Geomorphic F V FAC-Neutral	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imag.(C9) ressed Plants (D1) Position (D2) Fest (D5)
Depth (inches): pmarks: 'he observed soil profile meets hydric s WDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one 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 Sparsely Vegetated Concave Surf. (ield Observations: Surface Water Present?	(B7) es N	check all that apply Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth	/) d Leaves a (B13) Plants (B1 lfide Odor zospheres Reduced II Reduction i urface (C7 ell Data (D n in Rema (inches):	(B9) (C1) along Livir ron (C4) in Plowed S) 9) arks)	ng Roots (C Soils (C6)	Hydric Soil Present?	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) ows (C8) sible on Aerial Imag.(C9) ressed Plants (D1) Position (D2) Fest (D5)
Type.	(B7) (B7) es N es N	check all that apply Water-Staine Aquatic Faun: True Aquatic Faun: True Aquatic Faun: Vater-Staine Qxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth	/) d Leaves a (B13) Plants (B1 fide Odor cospheres Reduced In Reduction i urface (C7 ell Data (D n in Rema (inches): (inches):	(B9) (C1) along Livir ron (C4) in Plowed S) 9) arks)	ng Roots (C Soils (C6)	Hydric Soil Present? Secondary Indicators Surface Soil O Drainage Patt Dry-Season V Crayfish Burro Crayfish Burro Saturation Vis Stunted or Str ✓ Geomorphic F ✓ FAC-Neutral	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) ows (C8) sible on Aerial Imag.(C9) ressed Plants (D1) Position (D2) Fest (D5)
Type.	<pre>oil criteria. oil criteria. (B7) (B7) B8) es N es N es N</pre>	check all that apply Water-Staine Aquatic Faum True Aquatic Faum True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth X Depth X Depth	/) d Leaves a (B13) Plants (B1 fide Odor cospheres Reduced In cospheres Reduction i urface (C7 ell Data (D n in Rema (inches): (inches): (inches):	(B9) (C1) along Livir ron (C4) in Plowed \$) 9) urks)	ng Roots (C Soils (C6)	Hydric Soil Present?	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) ows (C8) iible on Aerial Imag.(C9) ressed Plants (D1) Position (D2) Fest (D5)
Type. Depth (inches): emarks: The observed soil profile meets hydric s YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one 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 Sparsely Vegetated Concave Surf. (ield Observations: Surface Water Present? Y Water Table Present? Y Saturation Present? Y Saturation Present? Y Saturation Present? Y	oil criteria. is required; √ (B7) B8) es N es N es N	check all that apply Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth o X Depth A Depth	/) d Leaves a (B13) Plants (B1 fide Odor cospheres Reduced II Reduction i urface (C7 ell Data (D n in Rema (inches): (inches): (inches):	(B9) (C1) along Livir ron (C4) in Plowed \$) 9) urks)	ng Roots (C Soils (C6)	Hydric Soil Present? Secondary Indicators Surface Soil O Drainage Patt Dry-Season V Crayfish Burre Stunted or Str Stunted or Str Geomorphic F FAC-Neutral Wetland Hydrology Prese	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) ows (C8) iible on Aerial Imag.(C9) ressed Plants (D1) Position (D2) Fest (D5)
Type. Depth (inches): emarks: The observed soil profile meets hydric s YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one 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 Sparsely Vegetated Concave Surf. (ield Observations: Surface Water Present? Y Water Table Present? Y Saturation Present? Y Saturatio	(B7) es N es N es N monitoring wel	check all that apply Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth X Depth X Depth I, aerial photos, previo	/) d Leaves a (B13) Plants (B1 fide Odor zospheres Reduced II Reduction i urface (C7 ell Data (D n in Rema (inches): (inches): (inches): ous inspec	(B9) (C1) along Livir ron (C4) in Plowed S) 9) arks) 	ng Roots (C Soils (C6)	Hydric Soil Present?	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) ows (C8) ible on Aerial Imag.(C9) ressed Plants (D1) Position (D2) Fest (D5)
Type. Depth (inches): emarks: The observed soil profile meets hydric s YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one 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 Sparsely Vegetated Concave Surf. (ield Observations: Surface Water Present? Y Water Table Present? Y Saturation Present? Y saturation Present? Y secribe Recorded Data (stream gauge,	(B7) B8) es N es N es N monitoring wel	check all that apply U Water-Staine Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth o X Depth I, aerial photos, previo	/) d Leaves a (B13) Plants (B1 fide Odor cospheres Reduced In Reduction i urface (C7 ell Data (D n in Rema (inches): (inches): (inches): ous inspec	(B9) (C1) along Livir ron (C4) in Plowed S) 9) arks) 	ng Roots (C Soils (C6)	Hydric Soil Present?	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) bws (C8) sible on Aerial Imag.(C9) ressed Plants (D1) Position (D2) Test (D5)
Type. Depth (inches): emarks: The observed soil profile meets hydric s YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one 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 Sparsely Vegetated Concave Surf. (ield Observations: Surface Water Present? Y Water Table Present? Y Saturation Present? Y escribe Recorded Data (stream gauge, emarks:	(B7) es N es N es N monitoring wel	check all that apply Water-Staine Aquatic Fauna True Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth X Depth I, aerial photos, previous	/) d Leaves a (B13) Plants (B1 fide Odor cospheres Reduced In Reduction i urface (C7 ell Data (D n in Rema (inches): (inches): (inches): ous inspec	(B9) (C1) along Livir ron (C4) in Plowed S) 9) arks) 	ng Roots (C Soils (C6)	Hydric Soil Present?	(minimum of two require Cracks (B6) erns (B10) Vater Table (C2) bws (C8) sible on Aerial Imag.(C9) ressed Plants (D1) Position (D2) Fest (D5)

Project/Site: Gretna Bottoms	City/County:	Sarpy Cour	nty S	ampling Date:	4/28/2015	5	
Applicant/Owner: Lyman-Richey Corporation		State	E NE S	Sampling Point:	S-01		
Investigators: Ben Fisher Austin Zigle	er	Section, Tov	wnship, Range	S 4 T 13N	R 10	E	
Landform (hillslope, terrace, etc.): Toe of Slope		Local Re	lief (concave, cor	nvex, none): No	ne		
Slope(%): 0 Lat: 41.1248386511058	Long: -96.30	8934558801	Datum: N	IAD 1983			
Soil Map Unit Name: Gibbon loamy fine sand, overwash, or	casionally flooded		NWI Classificati	on: None			
Are climatic / hydrologic conditions on the site typical for this tim	e of year? Yes	X No	(If No, expla	in in Remarks)			
Are Vegetation, Soil, Hydrology, significar	ntly disturbed?	Are "Normal	Circumstances"	present? Yes	Х	No	
Are Vegetation, Soil, Hydrology, naturally	problematic?	(If needed,	explain any ans	wers in Remarks.	.)		
SUMMARY OF FINDINGS - Attach a site map sl	nowing samplin	g point locatio	ons. transect	s. important	feature	s. etc	C.
Hydrophytic Vegetation Present? Yes X No	j			-,p		-,	
Hydric Soil Present? Yes No X	Is the Sample	d Area					
Wetland Hydrology Present? Yes No X	within a weak		Yes	NOX	-		
Remarks:							
The area characterized by this data form is an upland area adja however, the area met hydrophytic vegetation criteria.	acent to open water.	The area failed to c	lisplay indicators	of hydric soil and	l wetland	hydrol	ogy;
VEGETATION Use scientific names of plants.	<u>Absolute</u> Dom <u>% Cover</u> Spe	inant Indicator ecies Status	Dominance T	est Worksheet:			
Tree Stratum			Number of Do That Are OBL	ominant Species ., FACW, or FAC	:	2	(A)
Juniperus virginiana (Plot size: <u>15Ft</u>)	2	N FACU	Total Number	of Dominant			
	2 =Tot	al Cover	Species Acros	ss all Strata:		2	(B)
Herb Stratum (Plot size: 6 Et)							-
Asclepias incarnata	40	Y OBL	That Are OBL	minant Species , FACW, or FAC:	10	0.0%	(A/B)
Polygonum aviculare	30	Y FAC	<u> </u>				
Solidago gigantea	10	N FACW	Prevalence in	idex worksneet	:		
Digitaria sanguinalis	5	N FACU		over of: 40	1000000000000000000000000000000000000	/ by: 40	
	<u> </u>	N FACU			x 2 =	20	
Vine Stratum	=1 ot	al Cover		30	x 3 =	90	
vine ottatom			FAC species	12	x 4 =	48	
				s0	x 5 =	0	
				02	 (A)	108	(B)
			Column Totals	S:	_(//)	130	(D)
			Prevalei	nce Index = B/A=	: 2	.15	
			Hydrophytic V	egetation Indica	ators:		
			Rapid Tes	st for Hydrophytic	Vegetatio	on	
			X Dominand	ce Test > 50%			
			X Prevalence	e Index ≤ 3.0			
			Morpholog	gical Adaptations emarks or on a se	(Provide eparate sh	e suppo neet)	orting
				uc nyaropnytic V	eyetation	(⊏xp	iain)
			be present, u	nless disturbed c	problem	nology natic.	/ must
			Hydrophy Vegetation Pr	rtic resent? Yes	X N	D	
Remarks: (Include photo numbers here or on a separate sheet.)	00/ hans many i	1				

The area displayed dominant hydrophytic vegetation and displayed approximately 10% bare ground.



Profile Descri	iption: (Desc	ribe to the	depth ne	eded to doc	ument the indi	cator or	confirm th	he absence of Indicators.)		
Depth		Matrix			Redox Fe	atures				
(inches)	Color	(moist)	%	Color (m	oist) %	Type 1	Loc ²	Texture	Remark	s
0 to 18	10YR	5/2	100					COARSE SAND		
18 to 26	10YR	6/2	100	1				COARSE SAND		
¹ Type: C=Con	centration, D	=Depletion,	RM=Red	uced Martix, (CS=Covered or	Coated S	Sand Grair	ns. ² Location: PL=Pore Lining, N	√=Matrix.	
Hydric Soil I	ndicators:			Sandy Gle	eyed Matrix (S4)			Indicators for Problematic Hy	dric Soils: ³	k .
Histic Epipe	edon (A2)			Sandy Re	dox (S5)					
Black Histic	c (A3)			Stripped N	Aatrix (S6)					
Hydrogen S	Sulfide (A4)				icky Mineral (F1)			Dark Surface (S7)		
					wed Metrix (E2)			Very Shallow Dark Surface (TF1	2)	
								Other (Explain in Remarks)		
	(A10)				Matrix (F3)					
Depleted B	elow Dark Surf	ace (A11)		Redox Da	rk Surface (F6)					
Thick Dark	Surface (A12)			Depleted I	Dark Surface (F7)		3		
Sandy Muc	ky Mineral (S1))		Redox De	pressions (F8)			Indicators of hydrophytic vegeta wetland hydrology must be preser	t, unless	
5 cm Muck	y Peat or Peat	(S3)						disturbed or problematic.		
Restricti	ive Layer (i	f observe	d):							
Туре:										
Depth (inch	nes):							Hydric Soll Present? Ye	/SN	10 X
Remarks:										
The observed s	soil profile faile	d to display ir	dicators of	hydric soil.						
HYDROLOG	Y									
Wetland Hyd	Irology Indi	cators:								
Primary Indic	ators (minimu	um of one is	required;	check all tha	t apply)			Secondary Indicators (minin	num of two re	equired)
Surface Wa	ater (A1)			Water	Stained Leaves	(B9)		Surface Soil Cracks (B6)	
High Water	Table (A2)			Aquati	c Fauna (B13)	· · /		Drainage Patterns (B	10)	
Saturation	(A3)			True A	quatic Plants (B1	4)		Dry-Season Water Ta	able (C2)	
Water Mark	(B1)			Hydrog	en Sulfide Odor	(C1)		Crayfish Burrows (C8	5)	
Sediment D	Deposits (B2)			Oxidiz	ed Rhizospheres	along Livir	ng Roots (C	3) Saturation Visible on	Aerial Imag.(C	;9)
Drift Depos	its (B3)			Preser	nce of Reduced I	ron (C4)		Stunted or Stressed I	Plants (D1)	
Algal Mat o	or Crust (B4)			Recen	t Iron Reduction i	in Plowed S	Soils (C6)	Geomorphic Position	(D2)	
Iron Deposi	its (B5)			Thin M	luck Surface (C7)	. ,	FAC-Neutral Test (D	5)	
Inundation	Visible on Aeria	al Imagery (B	7)	Gauge	or Well Data (D	9)			,	
Sparsely Ve	egetated Conca	ave Surf. (B8)		Other	(Explain in Rema	irks)				
Field Observ	ations:									
Surface Wate	er Present?	Yes	Ν	X ok	Depth (inches):					
Water Table	Present?	Yes			Depth (inches):					
Saturation Pr	resent?	Yes	 X _ N	No	Depth (inches):		18	Wetland Hydrology Present?	Yes	No_X_
Describe Reserv	dod Doto (otrop					ationa) if a				
Describe Record	ueu Dala (Silea	ini yauye, nic	mitoring we	aenai priotos	s, previous inspec	3110115), 11 d	vallable.			
Remarks:										
The area failed	to meet wetlar	nd hydrology	criteria.							

Project/Site:	Gretna Bottoms		City/Coun	ty:	Sarpy Cour	ity	Sampling	Date:	4/28/20	15	
Applicant/Owner	: Lyman-Riche	y Corporation			State	: NE	Sampling	Point:	S-02		
Investigators:	Ben Fisher	Austin Zigler			Section, Tov	vnship, Range	S 4	T 13N	R	10E	
Landform (hillslo	pe, terrace, etc.):	Depression			Local Rel	ief (concave, c	onvex, no	ne): C	oncave		
Slope(%): 0	Lat:	41.1249707275119	Long:	-96.30874007	47861	Datum:	NAD 198	3			
Soil Map Unit Na	ame: Platte, Ing	lewood,& Barney soils, freque	ently flooded			NWI Classifica	tion: No	ne			
Are climatic / hy	drologic conditions	on the site typical for this time	of year?	Yes X	No	(If No, expl	lain in Rer	narks)			
Are Vegetation	, Soil,	Hydrology, significant	ly disturbed?	,	Are "Normal	Circumstances	present?	' Yes	5 X	No	
Are Vegetation	, Soil,	Hydrology, naturally p	roblematic?		(If needed,	explain any an	swers in F	Remarks	s.)		
SUMMARY	OF FINDINGS	- Attach a site map sh	owing sai	mplina poi	int locatio	ns. transec	ts. imp	ortant	featu	res. et	c.
Hydrophytic Ve	egetation Present?	Yes No	j			,					
Hydric Soil Pre	esent?	Yes No	Is the S	ampled Area	1						
Wetland Hydro	logy Present?	Yes X No	within e			Yes	X NO				
Remarks:											
The area chara	cterized by this data	a form is an open water pond.									
				<u> </u>							
VEGETATIO	DN – Use scienti	ific names of plants.	<u>Absolute</u> <u>% Cover</u>	Dominant Species	Status	Dominance	Test Wor	ksheet			
						Number of D	Dominant S	Species			
						That Are OE	BL, FACW	, or FAC):	0	(A)
						Total Numbe	er of Domi	nant			
						Species Acro	oss all Str	ata:		0	(B)
						Boroopt of D	ominant C	Nacion			
						That Are OB	L, FACW,	or FAC	:	0.0%	(A/B)
						Provalence	Index Wo	rkehoo	* -		
						Total %	Cover of:	INSILEE	L. Multi	nly hy:	
						OBL species	200001 01.	0	$\frac{1}{x 1} =$	0	
						EACW species	, <u> </u>	0	x 2 =	0	
						FAC species	<u> </u>	0	x 3 =	0	
						FACIL specie	ies	0	x 4 =	0	
							<u> </u>	0	x 5 =	0	
							·	0	(A)	0	(B)
							ais:		_('') _		(0)
						Prevai	ence inde	X = B/A			
						Hydrophytic	Vegetatio	on Indic	ators:		
						Rapid Te	est for Hyd	drophyti	c Vegeta	ation	
						Dominar	nce Test >	50%			
						Prevaler	nce Index	≤ 3.0			
						Morphol	ogical Ada Remarks o	aptation	s (Provi	de supp	oorting
						Problem	atic Hydro	ophytic V	Vegetati	on (Ex	plain)
						Indicators o be present,	f hydric so unless dis	oil and waturbed	vetland h or proble	vydrolog ematic.	y must
						Hydroph Vegetation I	nytic Present?	Yee		No	
Remarks: (Inclu No vegetation v	ide photo numbers vas observed.	here or on a separate sheet.)									



Torlie Description: (Description: (Description: (Description: (Description: (Description: (Description: (Description: (Description: Piceros))) Redax Features Depth (inches) Color (moist) % Color (moist) % Type 1 Loc 2 Texture Remarks Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. *1.ocation: PL=Pore Lining, M=Matrix. Hight CS pilpoton (A2) Sandy Gleyad Marix (G4) Coater Problematic Hydric Soils: 3 Coater Problematic Hydric Soils: 3 Heatic Epipoton (A2) Sandy Rabox (S5) Coater (Fr2) Coater Problematic Hydric Soils: 3 Stratified Layers (A5) Coardy Marix (G4) Coater (Fr2) Coater (Fr2) 2 cm Muck (A10) Depleted Marix (F2) Coater (Fr2) Coater (Fr2) Stratified Layers (A5) Coater (Fr2) Coater (Fr2) Coater (Fr2) Stratified Layers (A5) Coater (Fr2) Coater (Fr2) Coater (Fr2) Coater (Fr2) Stratified Layers (A5) Coater (Fr2) C	JIL									
Depth Matrix Medical Features (inches) Color (moist) % Color (moist) % Type 1 Loc 2 Texture Remarks Type: C-Concentration, D=Depletion, RM-Reduced Marks, CS4 % Type 1 Loc 2 Texture Remarks Heitosti (A1) Sandy Relay (S) Sandy Relay (S) Coast Parkin Redox (A10) Sandy Relay (S) Sandy Relay (S) Sandy Relay (S) Sandy Relay (S) Sandy Relay (F12) Back Heito (A3) Singleod Marks (S) Dark Surface (A10) Dark Surface (A11) Redox Peatures Sandy Relay (Marks (S) Dark Surface (A11) Dark Surface (A11) Dark Surface (A12) Other (Explain in Remarks) Sandy Macky Mineral (S1) Depleted Marks (F2) Sandy Macky Mineral (S1) Peadox Dark Surface (F7) Sandy Macky Mineral (S1) Peadox Dark Surface (F7) Sandy Macky Mineral (S1) Restrictive Layer (If Observed): Type: Mydric Soil Present? Yes	rofile Descrip	tion: (Describe to the	depth nee	ded to document	the indic	ator or co	onfirm the	absence of Indicators.)		
Syne: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. 2.ocation: PL=Pore Lining, M=Matrix. Synta: Soli Indicators: Indicators for Problematic Hydric Solis; 3 Histopol (A2) Sandy Redox (S6) Black Histic (A3) Stripped Matrix (S9) Black Histic (A3) Stripped Matrix (S9) Black Histic (A3) Dark Surface (S7) Stripped Matrix (F2) Dark Surface (S7) Commod K (A10) Depleted Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Redox Dark Surface (F7) Sandy Machy Mineral (S1) Redox Dark Surface (F7) Sandy Machy Mineral (S1) Redox Depressions (F8) So m Muck Peat or Peat (S3) Indicators of hydrophytic vegetation and wetland hydrophytic vegetation hydrophytic vegetation and vegetation and	Depth (inches)	Color (moist)	%	Color (moist)	edox Feat %	tures Type 1	Loc ²	Texture	R	emarks
ype: U-chonemination, Du-Depietorion, KM=Reducted Matrix, Cis=Covered of Coaled Sand Grains.										•
With South Hunkators: Indicators: Histonico (A1) Sandy Gleyed Matrix (S4) Histonico (A2) Sandy Redox (S5) Back Histo (A3) Stripped Matrix (S6) Hydroph Sulfide (A4) Loarny Mucky Merral (F1) Stratified Layers (A5) Loarny Mucky Merral (F1) Stratified Layers (A5) Loarny Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F3) Oppleted Back Surface (A12) Depleted Matrix (F3) So m Mucky Mereil (F1) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Matrix (F3) So m Mucky Paat or Peat (S3) Redox Dark Surface (F7) So m Mucky Paat or Peat (S3) Redox Dark Surface (F7) So m Mucky Paat or Peat (S3) Redox Dark Surface (F7) Type: Hydric Soil Present? Yes: Yes No marke: b soil sample was observed, area is an open water pond. Porture Advance (A1) Staturation (A3) Hydrogen Suffie Cor(1) Surface Water (A1) Water State (B1) Surface S(B1) Hydrology mater Table (C2) Othit Deposits (B2) Oxidecat Phases (B1) Surface Water (A1) Repent from Reduct In Reduct	ype: C=Conce	entration, D=Depletion,	RM=Reduc	ced Martix, CS=Co	overed or C	Coated Sa	and Grains.	4 4 Cocation: PL=Pore I	Lining, M=Matr	IX.
Black Histic (A3) Striped Matrix (S6) Pydrogon Sulfide (A4) Charmy Gleged Matrix (F3) Stratiled Layers (A5) Loamy Mucky Mineral (F1) Stratiled Layers (A5) Depleted Below Dark Surface (A11) Redox Dark Surface (A12) Depleted Below Dark Surface (A11) Redox Dark Surface (A12) Sandy Mucky Mineral (S1) Redox Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) Strictive Layer (If observed): Type: Depth (inches): Depth (inches): Depth (inches): Depth (inches): Surface Water (A1) Surface S01 Cracks (B1) Surface Water (A1) Surface S01 Surface Water (A1) Surface Water (A1) Surface S01 <	Histosol (A1)	on (A2)		Sandy Gleyed Ma Sandy Redox (S	atrix (S4) 5)			Coast Prairie Redox (A	16) es (F12)	<u>) IIS:</u>
□ bepleted below Dark Surface (A1) □ Hodex Dark Surface (Fe) □ bepleted Dark Surface (A1) □ bepleted Dark Surface (FF) □ Bendy Mucky Mineral (B1) □ Redox Depressions (FB) □ Bendy Mucky Mineral (B1) □ Redox Depressions (FB) □ Bendy Mucky Peat or Peat (S3) □ disturbed or problematic. □ Restrictive Layer (if observed): □ yee: □ rype: □ Depth (inches): □ bepth (inches): □ yee (A1) □ bepth (Inches): □ bepth (Inches): □ bepth (Inches): □ bepth (Inches):	Black Histic (/ Hydrogen Sul Stratified Lay 2 cm Muck (A	A3) fide (A4) ers (A5) .10)		Stripped Matrix (Loamy Mucky Mi Loamy Gleyed M Depleted Matrix (S6) neral (F1) atrix (F2) F3)			 Dark Surface (S7) Very Shallow Dark Surf Other (Explain in Remain 	face (TF12) Irks)	
Restrictive Layer (if observed): Type: Type:	 Depleted Belo Thick Dark Su Sandy Mucky 5 cm Mucky F 	ow Dark Surface (A11) urface (A12) Mineral (S1) Peat or Peat (S3)		Redox Dark Surfa Depleted Dark Surfa Redox Depressic	ace (F6) urface (F7) ons (F8)			³ Indicators of hydrophytic wetland hydrology must b disturbed or prol	c vegetation and be present, unles blematic.	s
Deprint (Inches):	Restrictive Type:	e Layer (if observed	d):							
Surface Water (A1) Water-Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crafish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Saturation Visible on Aerial Imag.(C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) ield Observations: Saturation Present? Yes No Depth (inches): Wetland Hydrology Present? Yes _X_ No escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Wetland Hydrology Present? Yes _X_ No	Depth (inches emarks: No soil sample w	s):as observed, area is an op	pen water po	nd.				Hydric Soll Present?	Yes	No
Iteld Observations: Yes X No Depth (inches): Unknown Surface Water Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No escribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: emarks: 'he area displays open water. '' </th <th>Depth (inches emarks: No soil sample w WDROLOGY /etland Hydro</th> <th>as observed, area is an op</th> <th>Den water por</th> <th>nd.</th> <th></th> <th></th> <th></th> <th>Secondary in direction</th> <th>Yes</th> <th>No</th>	Depth (inches emarks: No soil sample w WDROLOGY /etland Hydro	as observed, area is an op	Den water por	nd.				Secondary in direction	Yes	No
emarks: The area displays open water.	Depth (inches emarks: No soil sample w WDROLOGY Wetland Hydro Primary Indicate High Water Ta Saturation (A2 Water Marks Sediment Dep Drift Deposits Algal Mat or C Iron Deposits Inundation Vis Sparsely Veg	as observed, area is an op ology Indicators: ors (minimum of one is r (A1) able (A2) 3) (B1) bosits (B2) . (B3) Crust (B4) (B5) sible on Aerial Imagery (B' etated Concave Surf. (B8)	required; c	heck all that apply Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron F Recent Iron F Gauge or We Other (Explai	/) d Leaves (B a (B13) Plants (B14) fide Odor (C cospheres al Reduced Iron Reduced Iron Reduction in urface (C7) ell Data (D9) n in Remark	39) C1) Iong Living In (C4) Plowed So ((s)	Roots (C3)	Secondary Indicators Surface Soil Drainage Pa Dry-Season Crayfish Buri Saturation Vi Stunted or S Geomorphic FAC-Neutral	Yes s (minimum of Cracks (B6) tterns (B10) Water Table (C2 rows (C8) isible on Aerial Ir tressed Plants (I Position (D2) Test (D5)	two required
The area displays open water.	Depth (inches emarks: No soil sample w WDROLOGY Wetland Hydro Primary Indicato Surface Water High Water Tr Saturation (A: Water Marks Sediment Dep Drift Deposits Drift Deposits Drift Deposits Drift Deposits Inundation Vis Sparsely Veg ield Observat Water Table Pri Saturation Pres escribe Recorder	as observed, area is an op ology Indicators: ors (minimum of one is r (A1) able (A2) 3) (B1) bosits (B2) (B3) Crust (B4) (B5) sible on Aerial Imagery (B' etated Concave Surf. (B8) ions: Present? Yes esent? Yes etated (Stream gauge, mo	pen water pol	heck all that apply beck all that apply Water-Staine Aquatic Faun True Aquatic Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron F Thin Muck St Gauge or We Other (Explain A_ Depth A_ Depth aerial photos, previ	/) d Leaves (B a (B13) Plants (B14) fide Odor (C cospheres al Reduced Iron Reduction in urface (C7) II Data (D9) n in Remark (inches): (inches): (inches): ous inspection	39) (-) (long Living n (C4) Plowed So (Roots (C3) bils (C6)	Secondary Indicators Surface Soil Surface Soil Drainage Pa Dry-Season Crayfish Buri Saturation Vi Stunted or S Geomorphic FAC-Neutral Wetland Hydrology Pres	Yes s (minimum of Cracks (B6) tterns (B10) Water Table (C2 rows (C8) isible on Aerial Ir tressed Plants (E Position (D2) Test (D5) Sent? Yes	No
	Depth (inches emarks: No soil sample w YDROLOGY Vetland Hydro Primary Indicato Surface Water High Water T: Saturation (A: Water Marks Sediment Dep Drift Deposits Drift Deposits Drift Deposits Drift Deposits Sediment Dep Starsely Veg ield Observat Water Table Pri Saturation Pres escribe Recorded	as observed, area is an op ology Indicators: ors (minimum of one is r (A1) able (A2) 3) (B1) bosits (B2) (B3) Crust (B4) (B5) sible on Aerial Imagery (B' etated Concave Surf. (B8) ions: Present? Yes esent? Yes etate? Yes d Data (stream gauge, mo	pen water pol	heck all that apply Water-Staine Aquatic Faun True Aquatic Faun Oxidized Rhiz Oxidized Rhiz Presence of F Recent Iron F Other (Explain Other (Explain A	/) d Leaves (B a (B13) Plants (B14) fide Odor (C cospheres al Reduced Iron Reduction in urface (C7) II Data (D9) n in Remark (inches): (inches): (inches): ous inspection	39) () C1) Ilong Living n (C4) Plowed So (s) (s) (unk unk ions), if ava	Roots (C3) bils (C6)	Secondary Indicators Surface Soil Surface Soil Drainage Pa Dry-Season Crayfish Buri Saturation Vi Stunted or S Geomorphic FAC-Neutral Wetland Hydrology Press	Yes s (minimum of Cracks (B6) tterns (B10) Water Table (C2 rows (C8) isible on Aerial Ir tressed Plants (E Position (D2) Test (D5) Sent? Yes	No

Project/Site: Gretna Bottoms	City/Count	y:	Sarpy Cour	nty S	Sampling Date:	4/28/20	15	
Applicant/Owner: Lyman-Richey Corporation			State	: NE S	Sampling Point:	S-03		
Investigators: Ben Fisher Austin	Zigler		Section, Tov	vnship, Range	S 4 T 13N	R 1	10E	
Landform (hillslope, terrace, etc.): Depression	-		Local Rel	ief (concave, co	nvex, none): Co	oncave		
Slope(%): 0 Lat: 41.124973569687	Long: -	96.30885619	39429	Datum:	NAD 1983			
Soil Map Unit Name: Platte, Indewood & Barney soils.	frequently flooded			NWI Classificat	ion: None			
Are climatic / hydrologic conditions on the site typical for thi	is time of year?	Yes X	No	(If No. expla	in in Remarks)			
Are Vegetation Soil Hydrology sign	ificantly disturbed?	100 <u>X</u>	vo "Normal	Circumstancos"	procent? Vec	v	No	
Are Vegetation, Soil, Hydrology, sign		<i>r</i>	ale normai	Circumstances	present? Tes	~		
Are vegetation, Soil, Hydrology, hatu	irally problematic?		(If needed,	explain any ans	wers in Remarks	.)		
SUMMARY OF FINDINGS - Attach a site ma	p showing san	npling poi	nt locatio	ns, transect	s, important	featur	res, et	C.
Hydrophytic Vegetation Present? Yes X No		mailed Aree						
Hydric Soil Present? Yes X No	within a	Wetland?		Ves X	No			
Wetland Hydrology Present? Yes X No						_		
Remarks:								
The area characterized by this data form is an emergent w hydric soils, and wetland hydrology.	vetland area adjace	nt to open wa	ter. The area	a displayed indic	ators of hydroph	ytic vege	etation,	
VEGETATION Use scientific names of plants	Absolute	Dominant	Indicator					
Trop Stratum	<u>% Cover</u>	<u>Species</u>	Status	Dominance 1	fest Worksheet:			
				Number of Do That Are OBL	ominant Species _, FACW, or FAC	:	6	(A)
Shrub Stratum								_
Herb Stratum (Plot size: <u>6 Ft</u>)				Total Number	of Dominant		7	(P)
Rumex crispus	20	Y	FAC	Species Acius	ss an Strata.		1	_ (D)
Solidago gigantea	20	Y	FACW	Percent of Do	minant Species		95 7%	(
Cyperus esculentus	10	Y	FACW	That Are OBL	, FACW, or FAC		00.7 /0	_ (A/D)
Dasistoma macrophylla		Y	FACU	Prevalence li	ndex Worksheet	•		
Phalaris arundinacea	10	Y	FACW		over of:	• • • • • • • • • • • • • • • • • • • •	oly by	
	10	r V			10	$\frac{1}{x 1} =$	10 piy by.	
Galium aparine		 N	FACU		50	- ^	100	
Xanthium strumarium	5	N	FAC	FACW specie	s <u> </u>	- ^ <u>-</u> _	75	
	100	-Total Cover		FAC species		_ x 3 =	75	
Vine Stratum				FACU specie	es <u>15</u>	x 4 =	60	
				UPL species	0	x 5 =	0	
				Column Total	s: 100	(A)	245	(B)
				Prevale	ence Index = B/A=	=	2.45	
				Lludrophutic \	logototion India			
					vegetation indic	ators:		
						; vegeta	ation	
				X Dominan	ce Test > 50%			
				X Prevalence	ce Index ≤ 3.0			
				Morpholo	gical Adaptations	; (Provi	de supp	orting
				Problema	emarks of on a set atic Hydrophytic V	egetatio	on (Exr	olain)
				Indicators of	hydric soil and w	etland h	ydrolog	y must
				Hydrophy	ytic	. 5.000		
				Vegetation P	resent? Yes	Х	No	
Remarks: (Include photo numbers here or on a separate si	heet.)							



Profile Descri	ption: (Des	cribe to the	depth ne	eded to documen	t the indic	ator or	confirm	the absence of Indicators.)	
Depth		Matrix		-	Redox Feat	tures	,		
(inches)	Color	(moist)	%	Color (moist)	%	Type 1	Loc ²	Texture	Remarks
0 to 4	10YR	4/2	100					COARSE SAND	
4 to 12	10YR	3/2	90	7.5YR 4/6	10	С	М	FINE SAND	10% Dry
¹ Type: C=Con	centration, D	=Depletion,	RM=Redu	uced Martix, CS=C	overed or	Coated S	Sand Gra	ins. ² Location: PL=Pore Lining,	M=Matrix.
Hydric Soil In Histosol (A ²	ndicators:			 Sandy Gleyed M ✓ Sandy Redox (S 	latrix (S4)			Indicators for Problematic H	vdric Soils: ³
Black Histic Hydrogen S Stratified La 2 cm Muck	s (A3) Sulfide (A4) ayers (A5) (A10)			Stripped Matrix (Stripped Matrix (Loamy Mucky M Loamy Gleyed N Depleted Matrix	(S6) ineral (F1) /atrix (F2) (F3)			Iron-Manganese Masses (F12 Dark Surface (S7) Very Shallow Dark Surface (Tf Other (Explain in Remarks)	-
Depleted Be Thick Dark Sandy Mucl 5 cm Mucky	elow Dark Sur Surface (A12) ky Mineral (S1 / Peat or Peat	face (A11)) (S3)		Redox Dark Sur Depleted Dark S Redox Depressi	face (F6) Surface (F7) ons (F8)			³ Indicators of hydrophytic veget wetland hydrology must be pres disturbed or problemati	ation and ent, unless c.
Restricti Type: Depth (inch	ve Layer (es):	if observed	d):					Hydric Soil Present? Y	es X No
The observed s	soil profile mee	ets hydric soil	criteria.						
Wetland Hyd Primary Indica	rology Indi ators (minim	cators: um of one is	required;	check all that appl	y)			Secondary Indicators (mini	mum of two required)
 ☐ Surface Wa ✓ High Water ✓ Saturation (□ Water Mark 	ter (A1) Table (A2) A3) s (B1)			Water-Staine	ed Leaves (E na (B13) Plants (B14 Ilfide Odor (0	39) !) C1)		Surface Soil Cracks Drainage Patterns (Dry-Season Water Crayfish Burrows (C	(B6) B10) Fable (C2) 8)
Sediment D Drift Deposi Algal Mat o Iron Deposi Inundation	r Crust (B2) ts (B3) r Crust (B4) ts (B5) Visible on Aer	al Imagery (B	7)	Oxidized Rhi Presence of Recent Iron Thin Muck S Gauge or W	zospheres a Reduced Iro Reduction in Jurface (C7) ell Data (D9)	llong Livir on (C4) Plowed \$)	ng Roots ((Soils (C6)	C3) Saturation Visible o Stunted or Stressec Geomorphic Positio FAC-Neutral Test (I	n Aerial Imag.(C9) Plants (D1) n (D2) 95)
Sparsely Ve	egetated Conc	ave Surf. (B8)	1	Other (Expla	in in Remarl	ks)			
Field Observation Surface Water Table F	a tions: er Present? Present?	Yes Yes	_X_N	lo Depth lo _X Depth	n (inches): n (inches):		6		
Saturation Pro	esent?	Yes	<u>X</u> N	lo Depth	(inches):	S	urface	Wetland Hydrology Present?	Yes <u>X</u> No
Describe Record Remarks: The area displa	ded Data (stre	am gauge, mo	varology.	ll, aerial photos, prev	ious inspect	ions), if a	vailable:		

Project/Site:	Gretna Bottoms		City/Coun	ty:	Sarpy Cour	nty S	Sampling [Date:	4/28/20	15	
Applicant/Owner	r: Lyman-Riche	ey Corporation			State	E NE	Sampling	Point:	S-04A		
Investigators:	Ben Fisher	Austin Z	ligler	:	Section, To	wnship, Range	S 4	T 13N	R [,]	10E	
Landform (hillslo	ope, terrace, etc.):	Depression			Local Re	lief (concave, co	nvex, non	e): N	one		
Slope(%): 0	Lat:	41.1242613466832	Long:	-96.30835498 [,]	11338	Datum: N	NAD 1983	·			
Soil Map Unit Na	ame: Gibbon lo	amy fine sand overwash	occasionally floo	oded		NWI Classificati	on: Nor	ne			
Are climatic / by	drologic conditions	on the site typical for this	time of year?	Yes X	No	(If No. expla	in in Rem	arks)			
Are Vegetation	Soil	Hydrology signifi	cantly disturbed?		re "Normal	(ii No, expla	present?	Voc	×	No	
Are Vegetation	, Soil	Hydrology, signin		~	are normal	Circumstances	present	103		_ 110 _	
Are vegetation	, Soli	, Hydrology, hatura	any problematic?		(If needed,	explain any ans	wers in Re	emarks	;.)		
SUMMARY	OF FINDINGS	 Attach a site map 	showing sar	npling poir	nt locatio	ons, transect	s, impo	rtant	featur	res, et	с.
Hydrophytic Ve	egetation Present?	Yes No X	_ ls the S	ampled Area							
Hydric Soil Pre	esent?	Yes No X	within a	Wetland?		Yes	No	x			
Wetland Hydro	ology Present?	Yes X No				100					
Remarks:											
The area chara and hydric soil;	acterized by this dat however, the area	a form is an upland area l met wetland hydrology cri	ocated adjacent t teria.	to open water.	The area fa	ailed to display in	dicators o	f hydro	ophytic v	egetatio	ิท
VEGETATIO	DN – Use scient	tific names of plants.	Absolute	Dominant	Indicator						
	-		<u>% Cover</u>	<u>Species</u>	<u>Status</u>	Dominance T	est Work	sheet	;		
<u>Tree Stratum</u>	<u>n</u> (Plot siz	e: <u>30 Ft</u>)				Number of Do	Diminant S	pecies	` .	1	(A)
Juniperu	is virginiana		10	Y	FACU		_, 1 AOW,		<i>.</i>		_ ` ´
			10	=Total Cover		Total Number	of Domin	ant		_	
Shrub Stratu	<u>m</u> (Plot siz	e: <u>15Ft</u>)				Species Acros	ss all Stra	ta:	_	5	_(B)
Juniperu	is virginiana		5	Y	FACU	Percent of Do	minant Sr	vecies			
			5	=Total Cover		That Are OBL	, FACW, o	or FAC	:	20.0%	_(A/B)
Herb Stratum	<u>n</u> (Plot siz	e: <u>6 Ft</u>)				Descriptions of the					
Dasiston	na macrophylla		20	Y	FACU		idex wor	KSNee	E:		
Descura	inia incana		20	Y	UPL	Total % C	Cover of:		Multi	ply by:	
Solidago	gigantea		20	Y	FACW	OBL species		0	_ X1=	0	
Cyperus	esculentus		10	<u>N</u>	FACW	FACW specie	s	35	_ x 2 =	70	
Galium a	aparine			N	FACU	FAC species		0	x 3 =	0	
Ambrosi	a artemisiifolia		<u>5</u>	N	FACU	- FACU specie	S	60	x 4 =	240	
Digitaria			<u>5</u>	N	FACU	UPL species		20	x 5 =	100	
Trifolium			5	N	FACU	Column Total	. .	115	(A)	410	(B)
			100			Drovalo	5. <u> </u>		_`´_	2.57	
Vine Stratum	1					Prevale	nce maex	= <i>D</i> /A:	= 	3.57	
<u>vine otratan</u>	<u>. </u>					Hydrophytic V	egetation/	n Indic	ators:		
						Rapid Tes	st for Hydi	rophyti	c Vegeta	ation	
						Dominand	ce Test >	50%			
						Prevalenc	ce Index ≤	3.0			
						Morpholo	gical Adap	otation	s (Provi	de supp	oorting
						data in Re	emarks or	on a s	eparate	sheet)	0
						Problema	tic Hydrop	ohytic \	/egetation	on (Exp	plain)
						Indicators of be present, u	hydric soi Inless dist	l and w urbed	etland h or proble	ydrolog ematic.	ly must
						Hydrophy Vegetation Pr	/tic resent?	Yes		No 3	x
Remarks: (Inclu	ude photo numbers	here or on a separate she	eet.)			l					<u> </u>
The area is dor	minated by upland v	vegetation.									



Profile Descri	iption: (Des	cribe to the	depth n	eeded to d	ocument	the indic	ator or	confirm th	ne absence of Indicators.)		_
Depth		Matrix		<u> </u>	R	edox Fea	tures				
(inches)	Colo	r (moist)	%	Color	(moist)	%	Type 1	Loc ²	Texture	Remarks	
0 to 6	10YR	4/2	100						COARSE SAND		
6 to 16	10YR	5/2	100						COARSE SAND		
¹ Type: C=Con	centration, [D=Depletion,	RM=Re	duced Mart	ix, CS=Co	overed or	Coated S	Sand Grair	ns. ² Location: PL=Pore Lining, N	/I=Matrix.	
Hydric Soil I	ndicators:				Claused M				Indicators for Problematic Hy	dric Soils: ³	
	1)				Gleyed Ma	atrix (54)			Coast Prairie Redox (A16)		
	edon (A2)			Sandy	Redox (S5	5)			Iron-Manganese Masses (F12)		
Black Histic	c (A3)			Strippe	ed Matrix (S	56)			Dark Surface (S7)		
Hydrogen S	Sulfide (A4)			Loamy	Mucky Mir	neral (F1)			Very Shallow Dark Surface (TF1	2)	
Stratified La	ayers (A5)			Loamy	Gleyed Ma	atrix (F2)			Other (Explain in Remarks)		
2 cm Muck	(A10)			Deplet	ed Matrix (F3)					
Depleted B	elow Dark Su	rface (A11)		Redox	Dark Surfa	ace (F6)					
Thick Dark	Surface (A12)		Deplet	ed Dark Su	urface (F7)			3		
Sandy Muc	ky Mineral (S	1)		Redox	Depressio	ns (F8)			indicators of hydrophytic vegetat wetland hydrology must be preser	ion and it, unless	
5 cm Muck	y Peat or Pea	t (S3)							disturbed or problematic.		
Restricti	ive Layer (if observe	d):								
Type:	voo):								Hydric Soil Present? Ye	s No X	(
Deptin (inch											
The observed s	soil profile fail	ed to display ir	dicators of	of hydric soil.							
HYDROLOG	Y										
Wetland Hyd	- Irology Ind	icators									
Primary Indic	ators (minim	num of one is	required	d; check all	that apply	()			Secondary Indicators (minim	um of two required	d)
Surface Wa	ter (A1)		•	Wa	ater-Staine	, d Leaves (E	39)	<u> </u>	Surface Soil Cracks (B6)	<u> </u>
High Water	Table (A2)				uatic Fauna	a (B13)			Drainage Patterns (B	10)	
Saturation	(A3)				le Aquatic I	Plants (B14	4)		Dry-Season Water Ta	ble (C2)	
Water Mark	(B1)			🗌 Ну	drogen Suli	fide Odor (C1)		Crayfish Burrows (C8)	
Sediment D	Deposits (B2)			Ox	idized Rhiz	ospheres a	along Livir	g Roots (C3	3) Saturation Visible on	Aerial Imag.(C9)	
Drift Depos	its (B3)			Pre	esence of R	Reduced Irc	on (C4)		Stunted or Stressed F	Plants (D1)	
Algal Mat o	r Crust (B4)			Re	cent Iron R	eduction in	Plowed S	Soils (C6)	Geomorphic Position	(D2)	
Iron Depos	its (B5)			🗌 Th	in Muck Su	urface (C7)			FAC-Neutral Test (D5	i)	
Inundation	Visible on Ae	rial Imagery (B	7)	🗌 Ga	auge or We	II Data (D9))				
Sparsely Ve	egetated Con	cave Surf. (B8))	Otl	her (Explair	n in Remar	ks)				
Field Observ	ations:										-
Surface Wate	er Present?	Yes		No X	Depth	(inches):					
Water Table	Present?	Yes		No X	Depth	(inches):					
Saturation Pr	esent?	Yes	X	No	Depth	(inches):		4	Wetland Hydrology Present?	Yes <u>X</u> No	
Describe Record	ded Data (stre	eam gauge, mo	onitoring v	vell, aerial ph	otos, previo	ous inspect	ions), if a	vailable:			
Remarks:											
The area displa	ayed indicator	s of wetland hy	/drology.								

Project/Site:	Gretna Bottoms		City/Coun	ty:	Sarpy Cour	nty S	Sampling D	Date:	4/28/20	15	
Applicant/Owner	: Lyman-Riche	y Corporation			State	: NE	Sampling I	oint:	S-04B		
Investigators:	Ben Fisher	Austin Zigle	r	S	Section, Tov	wnship, Range	S 4	T 13N	R [,]	10E	
Landform (hillslo	pe, terrace, etc.):	Depression			Local Rel	lief (concave, co	nvex, none	э): N	one		
Slope(%): 0	Lat:	41.1242970315113	Long:	-96.306674762	25926	Datum:	NAD 1983				
Soil Map Unit Na	ame: Platte Ind	lewood & Barney soils, freque	ently flooded			NWI Classificat	ion: Non	e			
Are climatic / hvo	drologic conditions	on the site typical for this time	e of vear?	Yes X	No	(If No. expla	in in Rem	arks)			
Are Vegetation	Soil	Hydrology significant	llv disturbed?		re "Normal	 Circumstances"	nresent?	Yes	X	No	
Are Vegetation	, Soil,	Hydrology, significant	vroblematic?								
Are vegetation	, 3011,	, naturally ,	noblematic :		(If needed,	explain any ans	wers in Re	marks	.)		
SUMMARY	OF FINDINGS	 Attach a site map sh 	owing sar	npling poir	nt locatio	ons, transect	s, impo	rtant	featur	es, et	с.
Hydrophytic Ve	egetation Present?	Yes <u>No X</u>	Is the S	ampled Area							
Hydric Soil Pre	esent?	Yes No X	within a	Wetland?		Yes	No	х			
Wetland Hydro	logy Present?	Yes No X							_		
Remarks:											
The area charac vegetation, hyd	cterized by this data ric soils, and wetlar	a form is an upland area locat nd hydrology criteria.	ed east of a	large wetland o	complex. Th	e area failed to	display ind	icators	of hydr	ophytic	
VEGETATIC)N – Use scienti	ific names of plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominance 1	Test Work	sheet			
Tree Stratum	<u>l</u>					Number of D	ominant S	oecies			
Shrub Stratur	m (plataia					That Are OB	_, FACW,	or FAC	:	1	(A)
Juniperus	s virginiana	e: <u>15Fl</u>)	10	Y	FACU	Total Number		ant			
e anipera	o mgimana		10	-Total Cover		Species Acro	ss all Strat	an a:		3	(B)
Herb Stratum) (Dist size										_
Solidago	rigantoa	e: <u>6 Ft</u>)	30	v	EACW/	Percent of Do	minant Sp			33.3%	(A/B)
Descurai	inia incana		30 15	Y	UPI		., 1 AOW, C				
Equisetu	marvense			N	FAC	Prevalence I	ndex Wor	kshee	t:		
Rumex a	Iltissimus		10	N	FACW	Total % C	Cover of:		Multi	ply by:	
Ambrosia	a artemisiifolia		5	N	FACU	OBL species		0	x 1 =	0	
Galium a	iparine		5	N	FACU	FACW specie	es	40	x 2 =	80	
Trifolium	repens		5	Ν	FACU	FAC species		10	x 3 =	30	
			80	=Total Cover		FACU specie	es	25	x 4 =	100	
Vine Stratum	<u> </u>					UPL species		15	x 5 =	75	
								90	(A)	285	(B)
							S:		_('') _	200	(0)
						Prevale	ence Index	= <i>B</i> /A:		3.17	
						Hydrophytic	legetation	۱ Indic	ators:		
						Rapid Te	st for Hydr	ophyti	c Vegeta	ation	
						Dominan	ce Test >	50%			
						Prevalen	ce Index ≤	3.0			
						Morpholo	gical Adap	otation	s (Provi	de supp	orting
						data in R Problema	emarks or atic Hydrop	on a s hytic \	eparate /egetati	sheet) on (Exp	olain)
						Indicators of be present, u	hydric soil unless dist	and w urbed	etland h	iydrolog ematic.	y must
						Hydroph Vegetation P	ytic resent?	Yes		No)	K
Remarks: (Inclu The area failed	ide photo numbers to meet hydrophytic	here or on a separate sheet.) c vegetation criteria.									



Depth Interface (inches) Color (moist) % Type 1 Loc 2 0 to 8 10YR 4 / 2 100 8 to 18 10YR 5 / 2 100 "Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand G Hydric Soil Indicators:	Texture Remarks COARSE SAND 20% Clay COARSE SAND 20% Clay rains. & Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils: 3 Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No X								
0 to 8 10YR 4 / 2 100 8 to 18 10YR 5 / 2 100 1Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand G Hydric Soil Indicators:	COARSE SAND 20% Clay COARSE SAND								
8 to 18 10YR 5 / 2 100 'Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand G Hydric Soil Indicators:	COARSE SAND rains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils: ³ Coast Prairie Redox (A16) 3 Iron-Manganese Masses (F12) 3 Dark Surface (S7) 4 Very Shallow Dark Surface (TF12) 4 Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No X								
¹ Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand G Hydric Soil Indicators:	rains. ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils: ³ Coast Prairie Redox (A16) 1000000000000000000000000000000000000								
Hydric Soil Indicators: Sandy Gleyed Matrix (S4) Histosol (A1) Sandy Redox (S5) Black Histic (A3) Stripped Matrix (S6) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Type: Type: Deplet (inches): Remarks: The observed soil profile failed to display indicators of hydric soil. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators: Primary Indicators:	Indicators for Problematic Hydric Soils: 3 Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No X								
Histosol (A1) Sandy Gleyed Matrix (S4) Histo Epipedon (A2) Sandy Redox (S5) Black Histic (A3) Stripped Matrix (S6) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Type: Type:	Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes NoX								
Histic Epipedon (A2) Sandy Redox (S5) Black Histic (A3) Stripped Matrix (S6) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type:	Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No X								
Black Histic (A3) Stripped Matrix (S6) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type:	Indireventional galaxies (12) Dark Surface (S7) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No _X								
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type:	Dark Surface (S7) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No _X								
Stratified Layers (A5) Loamy Gleyed Matrix (F2) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type:	Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes NoX								
2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type:	Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No _X								
Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) S cm Mucky Peat or Peat (S3) Restrictive Layer (if observed): Type: Depth (inches): Remarks: The observed soil profile failed to display indicators of hydric soil. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators: (minimum of one is required: check all that apply)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No _X								
Image: Depicted Data Surface (A12) Image: Thick Dark Surface (A12) Image: Depicted Dark Surface (F7) Image: Sandy Mucky Mineral (S1) Image: Sandy Mucky Peat or Peat (S3) Image: Restrictive Layer (if observed): Type: Image: Type: Type: Type: Image: Type: Type: Image: Type: Type: Type: Type: Type: Type: Type: Image: Type: Ty	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No X								
	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No _X								
	wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No X								
	Hydric Soil Present? Yes <u>No X</u>								
Type:	Hydric Soil Present? Yes No _X								
Depth (inches):	Hydric Soil Present? Yes <u>No X</u>								
Remarks: The observed soil profile failed to display indicators of hydric soil. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required: check all that apply)									
The observed soil profile failed to display indicators of hydric soil. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required: check all that apply)									
	Secondary Indicators (minimum of two required)								
Surface Water (A4)									
High Water Table (A2)	Drainage Patterns (B10)								
Saturation (A3) True Aquatic Plants (B14)	Dry-Season Water Table (C2)								
Water Marks (B1)	Crayfish Burrows (C8)								
Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots	(C3) Saturation Visible on Aerial Imag.(C9)								
Drift Deposits (B3)	Stunted or Stressed Plants (D1)								
Algal Mat or Crust (B4)	6) Geomorphic Position (D2)								
Iron Deposits (B5)	FAC-Neutral Test (D5)								
Inundation Visible on Aerial Imagery (B7)									
Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks)									
Field Observations:									
Surface Water Present? Yes No X Depth (inches):	_								
Water Table Present? Yes <u>No X</u> Depth (inches):	Wetland Hydrology Present? Yes No X								
Saturation Present? Yes <u>No X</u> Depth (inches):									
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:									
Remarks:									
The area railed to fillet wettahd hydrology chiteria.									
Project/Site: Gretna Bottoms	City/Coun	ity:	Sarpy Cour	nty S	Sampling E	Date:	4/28/20)15	
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Applicant/Owner: Lyman-Richey Corporation			State	: NE	Sampling I	Point:	S-05		
Investigators: Ben Fisher Austin Zigle	r	:	Section, Tov	vnship, Range	S 4	T 13N	R	10E	
Landform (hillslope, terrace, etc.): Depression			Local Rel	ief (concave, co	nvex, non	e): No	one		
Slope(%): 0 Lat: 41.1244089255251	Long:	-96.30861861	79023	Datum:	NAD 1983				
Soil Map Unit Name: Gibbon loamy fine sand, overwash, oco	casionally floo	oded		NWI Classificat	ion: Nor	ie			
Are climatic / hydrologic conditions on the site typical for this time	e of year?	Yes X	No	(If No, expla	ain in Rem	arks)			
Are Vegetation, Soil, Hydrology, significan	tly disturbed?	>A	Are "Normal	Circumstances"	present?	Yes	х	No	
Are Vegetation, Soil, Hydrology, naturally	problematic?		(If needed	evolain any ans	wers in Re	amarks)		
		malina nai				rtont	.) footuu	***	
Hydrophytic Vegetation Present? Yes X No	owing sai	inpling pol		ns, transect	<u>s, impo</u>	riani	Tealu	ies, ei	<u>.</u>
Hydric Soil Present?	Is the S	ampled Area							
Wetland Hydrology Present?	within a	a Wetland?		Yes	No	Х	_		
The area characterized by this data form is an upland area loca area met hydrophytic vegetation and wetland hydrology criteria.	ted adjacent	to open water.	The area fa	iled to display ir	idicators o	f hydric	; soil; ho	owever,	the
VEGETATION_ Use scientific names of plants.	Absolute % Cover	Dominant Species	Indicator Status	Deminence					
Tree Stratum (Plot size: 20 Et)	<u>/// 00701</u>	000000	otatas	Number of D		sneet:			
Salix nigra	10	Y	OBL	That Are OB	L, FACW,	or FAC	: _	4	(A)
Celtis occidentalis	5	Y	FAC	-					
Juniperus virginiana	5	Y	FACU	I otal Number Species Acro	ss all Stra	ant ta:		5	(B)
	20	=Total Cover							_ (=)
Shrub Stratum				Percent of Do	minant Sp	ecies		80.0%	(A/B)
Herb Stratum (Plot size: 6 Ft)				That Are OBL	., FACW, c	or FAC:			_``´
Carex festucacea	45	Y	FACW	Prevalence I	ndex Wor	ksheet	:		
Solidago gigantea	20	Y	FACW	Total % C	Cover of:		Multi	iply by:	
Descurainia incana	10	Ν	UPL	OBL species		10	x 1 =	10	
Galium aparine	10	Ν	FACU	FACW specie	es	65	x 2 =	130	
Rumex crispus	10	Ν	FAC	FAC species		15	x 3 =	45	
Digitaria sanguinalis	5	Ν	FACU	FACIL specie		20	x 4 =	80	
	100	=Total Cover			,5	10	x 5 =	50	
Vine Stratum						120		215	(P)
				Column Total	s:	120	(A)	315	<u>(</u> D)
				Prevale	nce Index	= B/A=	·	2.63	
				Hydrophytic	/egetatior	n Indica	ators:		
				Rapid Te	st for Hydr	ophytic	: Vegeta	ation	
				X Dominan	ce Test >	50%			
				X Prevalen	ce Index ≤	3.0			
				Morpholo	gical Adap	otations	(Provi	ide supp	orting
				data in R	emarks or	on a se	eparate	sheet)	nloin)
						nyuc v	egetati	UII (EX	
				be present, u	injaric soil inless dist	urbed o	or probl	ematic.	y must
				Hydroph Vegetation P	ytic resent?	Yes	х	No	
Remarks: (Include photo numbers here or on a separate sheet.)	1			1					

The area is dominated by upland vegetation.



Profile Descri	iption: (Des	cribe to the	depth ne	eded to docum	ent the indi	cator or	confirm t	the absence of Indicators.)		
Depth		Matrix			Redox Fea	atures				
(inches)	Color	(moist)	%	Color (moist	t) %	Type 1	Loc ²	Texture	Remarks	
0 to 8	10YR	5/2	100					LOAMY SAND		
8 to 16	10YR	2/2	98	7.5YR 4/6	2	С	М	SANDY CLAY LOAM		
¹ Type: C=Con	centration, D	=Depletion,	RM=Redu	uced Martix, CS	=Covered or	Coated S	Sand Gra	ins. ² Location: PL=Pore Lining, N	<i>I</i> =Matrix.	
Hydric Soil I Histosol (A' Histic Epipe Black Histic Hydrogen S Stratified La 2 cm Muck Depleted B Thick Dark Sandy Muc 5 cm Muck Restriction	ndicators: 1) edon (A2) c (A3) Sulfide (A4) ayers (A5) (A10) elow Dark Sur Surface (A12) ky Mineral (S1 y Peat or Peat ive Layer (face (A11)) (S3) if observed	d):	 Sandy Gleyed Sandy Redox Stripped Matr Loamy Mucky Loamy Gleyee Depleted Mat Redox Dark S Depleted Dar Redox Depres 	d Matrix (S4) (S5) rix (S6) / Mineral (F1) d Matrix (F2) rix (F3) Surface (F6) k Surface (F7) ssions (F8))		Indicators for Problematic Hy Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF1 Other (Explain in Remarks) Indicators of hydrophytic vegetal wetland hydrology must be preser disturbed or problematic.	dric Soils: ³ 2) iion and it, unless	
Type: Depth (inch Remarks: The observed s	nes):	ed to display ir	ndicators of	hydric soil.				Hydric Soil Present? Ye	s No	
HYDROLOG Wetland Hyd Primary Indic Surface Wa High Water Saturation Vater Mark Sediment D Drift Depos Algal Mat o Iron Deposi Inundation Sparsely Wa Field Observ Surface Water Vater Table Saturation Pr	Y Irology Indi ators (minim ater (A1) Table (A2) (A3) (A5) (A2) (A3) (A5) (icators: um of one is ial Imagery (B ave Surf. (B8) Yes Yes Yes	7) 7) N N N	check all that all Water-State Aquatic Fail True Aquatic Fail True Aquatic Fail Oxidized I Oxidized I Presence Recent Inc Thin Mucl Gauge or Other (Ex Io X De X De Io X Do De	pply) ained Leaves (auna (B13) atic Plants (B1 Sulfide Odor Rhizospheres of Reduced Ir on Reduction i k Surface (C7 Well Data (D9 plain in Rema pth (inches): pth (inches):	(B9) (C1) along Livir on (C4) n Plowed S) 9) rks)	g Roots (C Soils (C6)	Secondary Indicators (minim Surface Soil Cracks (Drainage Patterns (B Dry-Season Water Ta Crayfish Burrows (C8 Saturation Visible on Stunted or Stressed F Geomorphic Position FAC-Neutral Test (D8	ium of two requi B6) 10) ible (C2)) Aerial Imag.(C9) Plants (D1) (D2) 5) Yes _X_ No	ired)
Describe Record						rtions) if a	vailablo:			
Remarks: The area displa	ayed indicators	s of wetland hy	ydrology.	n, aenai protos, p	ievious inspec	Luons), IT A	vanadie:			

Project/Site:	Gretna Bottoms		City/Coun	ty:	Sarpy Cour	nty	Sampling Date:	4/28/2	.015	
Applicant/Owner	: Lyman-Riche	y Corporation			State	: NE	Sampling Point:	S-06		
Investigators:	Ben Fisher	Austin Zigle	r		Section, Tov	wnship, Range	S 4 T 13	N R	10E	
Landform (hillslo	pe, terrace, etc.):	Depression			Local Re	lief (concave, c	onvex, none): (Concave)	
Slope(%): 0	Lat:	41.1232130945238	Long:	-96.30685788	03988	Datum:	NAD 1983			
Soil Map Unit Na	ame: Gibbon lo	amy fine sand, overwash, occ	asionally floc	oded		NWI Classifica	ation: None			
Are climatic / hyd	drologic conditions	on the site typical for this time	e of year?	Yes X	No	(If No, exp	lain in Remarks)			
Are Vegetation	, Soil,	Hydrology, significant	ly disturbed?	, A	Are "Normal	Circumstances	" present? Ye	s X	No	
Are Vegetation	, Soil,	Hydrology, naturally p	problematic?		(If needed	evolain anv an	swers in Remark	(9)		
		Attach a site man ch		nnling noi	(il liceded,			.s.)		~
SUIVIIVIAR I	OF FINDINGS	Ves X No	owing sar	npling pol	nt locatio	ons, transed	ts, importan	<u>t reatu</u>	ires, et	С.
Hydric Soil Pre	sent?		Is the S	ampled Area						
Wetland Hydro	logy Present?		within a	Wetland?		Yes	X No			
Pomorkov	5,									
The area chara	cterized by this data	a form is a low-lving area con	taining an en	closed wetland	d. The area	displayed indic	ators of hydrophy	vtic veae	etation. h	/dric
soils, and wetla	nd hydrology.							no rogo	iadion, ny	June
VEGETATIC	N – Use scient	ific names of plants.	Absolute	Dominant	Indicator					
The Oliver		·	<u>% Cover</u>	Species	Status	Dominance	Test Workshee	t:		
Shrub Stratum	m					Number of I That Are OE	Dominant Specie 3L, FACW, or FA	s C: _	2	(A)
Herb Stratum) (Dieteia					Total Numbe	er of Dominant			
Fleochar	· (PIOLSIZ)	e. <u>ori</u>)	60	Y	OBI	Species Acr	oss all Strata:		2	(B)
Persicari	a lapathifolia			- <u> </u>	FACW			_		_
Convolvu	Ilus arvensis		10	N	FACU	 Percent of D That Are OB 	ominant Species	; C:	100.0%	(A/B)
Persicari	a pensylvanica		10	N	FACW					
Lappula	redowskii		5	N	FAC	Prevalence	Index Workshe	et:		
			115	=Total Cover		Total %	Cover of:	Mult	tiply by:	
Vine Stratum	_					OBL species	60	x 1 =	60	
						FACW spec	ies 40	x 2 =	80	
						FAC species	5	x 3 =	: 15	
						FACU spec	ies10	x 4 =	: 40	
						UPL species	<u> </u>	x 5 =	: 0	
						Column Tota	als: 115	(A)	195	(B)
						Preval	lence Index = B//	4=	1.70	
						Hydrophytic	Vogotation Indi	catore		
							oct for Hydrophy	tic Vogo	tation	
								lic vege	lation	
							The Test $> 50\%$			
							nce index ≤ 3.0	(5		
						data in F	logical Adaptation Remarks or on a	separate	/ide supp a sheet)	
								wotland		
						be present,	unless disturbed	l or prob	lematic.	y must
						Hydroph Vegetation	nytic Present? Yes	s X	No	
Remarks: (Inclu	de photo numbers	here or on a separate sheet.)				1				
The area displa	yed dominant hydro	opnytic vegetation.								



Profile Description: (Describ	e to the depth need	led to document	the indica	ator or confirm th	e absence of Indicators.)	
DepthN (inches) Color (mo	pist) %	Color (moist)	edox Featu %	Type ¹ Loc ²	Texture	Remarks
0 to 22 10VR	2/1 100			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
¹ Type: C=Concentration, D=D	epletion, RM=Reduc	ed Martix, CS=Cov	vered or C	coated Sand Grain	is. ² Location: PL=Pore Lining, N	//=Matrix.
Hydric Soil Indicators:						1. a. 1. 3
Hydric Soft Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) Depleted Below Dark Surface Thick Dark Surface (A12) Sandy Mucky Mineral (S1) 5 cm Mucky Peat or Peat (S3 Restrictive Layer (if o Type: Depth (inches): Remarks: The observed soil profile displayed hydrology, soils are assumed hydrology.	(A11)	Sandy Gleyed Matt Sandy Redox (S5) Stripped Matrix (S6) Loamy Mucky Mind Loamy Gleyed Matt Depleted Matrix (F Redox Dark Surfact Depleted Dark Surfact Redox Depression	rix (S4) 6) eral (F1) trix (F2) 3) ce (F6) face (F7) s (F8) tures were	not observed, given	Indicators for Problematic Hyd □ Coast Prairie Redox (A16) □ Iron-Manganese Masses (F12) □ Dark Surface (S7) □ Very Shallow Dark Surface (TF1 ✓ Other (Explain in Remarks) ³ Indicators of hydrophytic vegetat wetland hydrology must be preserdisturbed or problematic. Hydric Soil Present? Ye the presence of obligate vegetation and put	2) ion and it, unless s X No imary indicators of wetlanc
HYDROLOGY Wetland Hydrology Indicate Primary Indicators (minimum 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 Ir	ors: of one is required; cf	heck all that apply) U Water-Stained Aquatic Fauna True Aquatic P Hydrogen Sulfi Oxidized Rhizo Presence of Re Recent Iron Re Thin Muck Sur Gauge or Well	Leaves (B (B13) lants (B14) de Odor (C spheres ald educed Iror eduction in I face (C7) Data (D9)	9) 1) ong Living Roots (C3 I (C4) Plowed Soils (C6)	Secondary Indicators (minim Surface Soil Cracks (Drainage Patterns (B Dry-Season Water Ta Crayfish Burrows (C8 Saturation Visible on Stunted or Stressed F Sunted or Stressed F FAC-Neutral Test (D5	num of two required) B6) 10) able (C2)) Aerial Imag.(C9) Plants (D1) (D2) 5)
Sparsely Vegetated Concave	Surf. (B8) Yes No Yes _X No	Other (Explain Depth (i Depth (i	in Remarks inches): inches):	s) 16	Wetland Hydrology Present?	Yes _X_ No
Remarks: The area displayed indicators of v	yauge, monitoring well, yauge, monitoring well, yauge, well, yauge, well, yauge, welland hydrology.	aerial photos, previor	us inspectio	ons), if available:		

Project/Site:	Gretna Bottoms			City/Coun	ty:	Sarpy Cour	nty	Sampling D)ate:	4/28/20)15	
Applicant/Owner	r: Lyman-Riche	y Corporation				State	: NE	Sampling F	oint:	S-07		
Investigators:	Ben Fisher		Austin Zigle	er		Section, Tov	wnship, Range	S 4	T 13N	R	10E	
Landform (hillslo	ope, terrace, etc.):	Depress	sion			Local Rel	lief (concave, c	onvex, none	э): С	onvex		
Slope(%): 2	Lat:	41.12319315	9064	Long:	-96.30718129	17435	Datum:	NAD 1983				
Soil Map Unit Na	ame: Gibbon lo	amy fine sand of	overwash oc	 casionally flor	oded		NWI Classifica	tion: Non	e			
Are climatic / by	drologic conditions	on the site typic	al for this tim	e of vear?	Yes X	No	(If No. expl	ain in Rema	arks)			
Are Vegetation	Soil	Hydrology	significan	itly disturbed?		re "Normal	Circumstances	" present?	Vos	×	No	
Are Vegetation	, 00ii,		, significan	nroblomatic?	r		Oncumstances	present	103		_ 110 _	
Are vegetation	, 3011,	nyunology	, naturally	problematic		(If needed,	explain any an	swers in Re	marks	.)		
SUMMARY	OF FINDINGS	- Attach a si	ite map sh	nowing sar	npling poi	nt locatio	ons, transec	ts, impo	rtant	featu	res, et	:C.
Hydrophytic Ve	egetation Present?	Yes	No X	ls tha S	ampled Area							
Hydric Soil Pre	esent?	Yes	No X	within a	Wetland?		Yes	No	х			
Wetland Hydro	ology Present?	Yes	No X							_		
Remarks:												
The area chara vegetation, hyd	cterized by this data Iric soils, and wetlar	a form is an upla nd hydrology.	and area adja	icent to the w	etland describ	ed by S-06.	The area failed	to display i	ndicate	ors of hy	/drophyt	tic
		itia namaa at	nlanta	Absolute	Dominant	Indicator						
VEGETATIC	JN - Use scient	inc names of	plants.	% Cover	Species	Status	Dominance	Test Work	sheet:			
Tree Stratum	<u>1</u>						Number of E	Dominant Sp	pecies		0	(•)
Shrub Stratu	m (Plot siz	e [.] 15Ft)				That Are OE	BL, FACW, o	or FAC	:	0	(A)
Gleditsia	triacanthos	<u> </u>	/	5	Y	FACU	Total Numbe	er of Domina	ant			
				5	=Total Cover		Species Acro	oss all Strat	a:		3	(B)
Herb Stratum	n (Plot siz	e' 6 Et)									_
Boutelou	a dactyloides	e. <u>011</u>)	40	Y	FACU	Percent of D That Are OB	ominant Sp L, FACW, c	ecies or FAC	: _	0.0%	(A/B)
Convolvu	ulus arvensis			30	Y	FACU						
Cirsium a	arvense			20	N	FACU	Prevalence	Index Worl	ksheet	::		
Helianth	us annuus			10	N	FACU	Total %	Cover of:		Multi	ply by:	
Taraxacu	um officinale			10	Ν	FACU	OBL species		0	_ x 1 =	0	
				110	=Total Cover		FACW speci	es	0	x 2 =	0	
Vine Stratum	<u>1</u>						FAC species		0	x 3 =	0	
							FACU speci	es	115	x 4 =	460	
							UPL species	. <u> </u>	0	x 5 =	0	
							Column Tota	ale.	115	(A)	460	(B)
							Broval	onco Indov	_ P /A	_`´_	4.00	
							Fievai	ence muex	= <i>D</i> /A		4.00	
							Hydrophytic	Vegetatior	1 Indic	ators:		
							Rapid Te	est for Hydr	ophyti	c Vegeta	ation	
							Dominar	nce Test > 5	50%			
							Prevaler	nce Index ≤	3.0			
							Morphol data in F	ogical Adap Remarks or	otations on a s	3 (Provi eparate	de supp sheet)	porting
							Indicators o be present.	f hydric soil unless dist	and w	etland l	ydrolog ematic.	jy must
							Hydroph Vegetation I	nytic Present?	Yes		No 2	x
Remarks: (Inclu	ude photo numbers	here or on a se	parate sheet.)								
The area is dor	minated by upland v	egetation.										



Profile Descr	iption: (Desc	ribe to the	depth nee	eded to documen	t the indi	cator or o	confirm t	the absence of Indicators.)			
Depth	Color	Matrix (moiot)	0/	Color (moint)		atures	1002	Toyturo	Bon	oorko	
(inches)		(moist)	<u> </u>	Color (moist)	%	Type			Ren	larks	
0 to 14	10YR	2/1	100								
14 to 18	10YR	3/1	100					SILTLOAM			
18 to 24	10YR	3/1	100					SILT LOAM	Gravel/pe	ebble	
¹ Type: C=Con	icentration, D	=Depletion,	RM=Redu	ced Martix, CS=C	overed or	Coated S	Sand Gra	ins. 4Location: PL=Pore Linin	g, M=Matrix.		
Hydric Soil I	ndicators:		Г	O an du Olaurad N				Indicators for Problematic	Hydric Soil	<u>s:</u> ³	
Histosol (A	1)		L	Sandy Gleyed IV	latrix (54)			Coast Prairie Redox (A16)			
	edon (A2)		L	Sandy Redox (S	5)			Iron-Manganese Masses (F	2)		
Black Histic	c (A3)		L	Stripped Matrix (S6)			Dark Surface (S7)			
Hydrogen S	Sulfide (A4)			Loamy Mucky M	ineral (F1)			Verv Shallow Dark Surface (TF12)		
Stratified La	ayers (A5)		L	Loamy Gleyed N	latrix (F2)			Other (Explain in Remarks)	,		
2 cm Muck	(A10)		[Depleted Matrix	(F3)						
Depleted B	elow Dark Surfa	ace (A11)	[Redox Dark Sur	face (F6)						
Thick Dark	Surface (A12)		[Depleted Dark S	urface (F7))		2			
Sandy Muc	ky Mineral (S1)	1	[Redox Depressi	ons (F8)			³ Indicators of hydrophytic veg	etation and		
5 cm Muck	y Peat or Peat ((S3)	_					disturbed or problem	atic.		
Restrict	ive Layer (if	f observed	d):								
Type:											
Depth (inch	nes):							Hydric Soil Present?	Yes	No	X
Remarks:											
The observed s	soil profile failed	d to display in	dicators of h	nydric soil.							
HYDROLOG	Y										
Wetland Hyd	lrology Indic	cators:									
Primary Indic	ators (minimu	im of one is	required; o	check all that appl	у)			Secondary Indicators (mi	nimum of tw	o requi	red)
Surface Wa	ater (A1)			Water-Staine	ed Leaves ((B9)		Surface Soil Crac	ks (B6)		
High Water	r Table (A2)			Aquatic Faur	na (B13)			Drainage Patterns	s (B10)		
Saturation	(A3)			True Aquatio	Plants (B1	4)		Dry-Season Wate	r Table (C2)		
U Water Mark	ks (B1)			🗌 Hydrogen Su	Ifide Odor	(C1)		Crayfish Burrows	(C8)		
Sediment D	Deposits (B2)			Oxidized Rhi	zospheres	along Livin	g Roots (0	C3) Saturation Visible	on Aerial Ima	g.(C9)	
Drift Depos	sits (B3)			Presence of	Reduced Ir	on (C4)		Stunted or Stress	ed Plants (D1))	
Algal Mat o	or Crust (B4)			Recent Iron	Reduction i	n Plowed S	Soils (C6)	Geomorphic Posit	ion (D2)		
Iron Depos	its (B5)			Thin Muck S	urface (C7)		FAC-Neutral Test	(D5)		
Inundation	Visible on Aeria	al Imagery (B	7)	Gauge or W	ell Data (D	9)					
Sparsely Ve	egetated Conca	ave Surf. (B8)		Other (Expla	in in Rema	rks)					
Field Observ	ations:										
Surface Wate	er Present?	Yes	No	o <u>X</u> Depth	(inches):						
Water Table	Present?	Yes	No	o <u>X</u> Depth	(inches):						
Saturation Pr	resent?	Yes	No	o <u>X</u> Depth	(inches):			Wetland Hydrology Present	Yes _	No)_X_
Describe Record	ded Data (strea	m gauge, mo	nitoring well	l, aerial photos, prev	ious inspec	ctions), if av	vailable:				
Demend											
The area failed	to meet wetlar	nd hydroloav	criteria.								
		,									



Project/Site:	Gretna Bottoms		City/Count	ty:	Sarpy Cour	nty S	Sampling Date:	4/28/2	015	
Applicant/Owner	r: Lyman-Riche	y Corporation			State	NE	Sampling Point:	S-08		
Investigators:	Ben Fisher	Austin Zigle	r	:	Section, Tov	wnship, Range	S 4 T 13N	I R	10E	
Landform (hillslo	ope, terrace, etc.):	Hillslope			Local Re	lief (concave, co	nvex, none): C	Convex		
Slope(%): 2	Lat:	41.1230888833318	Long: -	96.306175468	8705	Datum: I	NAD 1983			
Soil Map Unit Na	ame: Platte, Inc	lewood.& Barney soils, frequ	ently flooded			NWI Classificat	ion: None			
Are climatic / hv	drologic conditions	on the site typical for this time	e of year?	Yes X	No	(If No. expla	ain in Remarks)			
Are Vegetation	Soil	Hydrology significan	tly disturbed?		re "Normal	Circumstances"	present? Ye	s X	No	
Are Vegetation	, coil,	Hydrology, eiginneun	problematic?	,				, <u> </u>		
Ale vegetation	, 3011,				(If needed,	explain any ans	wers in Remark	s.)		
SUMMARY	OF FINDINGS	 Attach a site map sh 	owing sar	npling poir	nt locatio	ons, transect	s, importan	t featu	res, et	C.
Hydrophytic Ve	egetation Present?	Yes <u>X</u> No	Is the S	ampled Area						
Hydric Soil Pre	esent?	Yes <u>No X</u>	within a	Wetland?		Yes	No X			
Wetland Hydro	ology Present?	Yes <u>No X</u>								
Remarks:										
The area chara	acterized by this data	a form is an upland area surre	ounding an en	nergent wetlar	nd and adja	cent to the wetla	nd described in	S-06. TI	ne area fa	ailed
to display indica		and wettand hydrology, nower	rei, lite alea i	net nyaropnyu	ic vegetation	i chiena.				
VEGETATIC	DN – Use scient	ific names of plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominanco	Fast Workshood			
Tree Stratum	ı		<u></u>	<u></u>		Number of D	ominant Species			
<u></u>	-					That Are OB	L, FACW, or FA	。 C: _	1	(A)
Shrub Stratu	<u>m</u> (Plot siz	e: <u>15Ft</u>)								
Gleditsia	a triacanthos		2	N	FACU	Total Number	of Dominant		1	(B)
Salix hig	ra		Z	N	OBL			_		_ (D)
				_=Total Cover		Percent of Do	minant Species		100.0%	(A/B)
Herb Stratum	n (Plot siz	e: <u>6 Ft</u>)				That Are OBL	., FACW, or FAC):	100.070	_ (,,,,,,)
Poa prat	ensis		40	Y	FAC	Prevalence I	ndex Workshee	et:		
Convolve	ulus arvensis			N	FACU	Total % (Cover of:	Mult	iply by:	
Digitaria	sanguinalis			N	FACU		2	$\frac{1}{x 1} =$	2	
Fauisetu			5	N	FAC	EACW appeal	5	 x 2 =	10	
Solidago	o gigantea		5	N	FACW		45 <u>45</u>	x 3 =	135	
Cirsium	arvense		2	N	FACU	FAC species			222	—
Setaria g	glauca		2	N	FACU	- FACU specie	es			
Taraxacu	um officinale		2	N	FACU	UPL species	0	_ x o =	0	
			106	=Total Cover		Column Total	s:110	(A)	379	(B)
Vine Stratum	<u>1 </u>					Prevale	ence Index = B/A	i =	3.45	
						Hydrophytic	egetation Indi	cators:		
						Rapid Te	st for Hydrophyt		tation	
							$c_0 T_{oct} > 50\%$	lo vegei	allon	
						Prevalen	ce index ≤ 3.0	-		
						Morpholo	emarks or on a	is (Prov separate	vide supp	orting
						Problema	atic Hydrophytic	Vegetat	ion (Exp	olain)
						Indicators of be present, u	hydric soil and unless disturbed	wetland or prob	hydrolog lematic.	y must
						Hydroph Vegetation P	ytic resent? yes	x	No	
Domester (h.)	ido photo accelto	have as an a second of the state					162	~ ~		
The area meets	s hydrophytic veget	nere or on a separate sneet.) ation criteria.								



Profile Descr	iption: (Des	cribe to the	depth nee	ded to document	the indic	cator or	confirm t	he absence of Indicators.)	
Depth		Matrix		R	edox Fea	tures			
(inches)	Colo	r (moist)	%	Color (moist)	%	Type 1	Loc ²	Texture	Remarks
0 to 18	10YR	2/1	100					SILT LOAM	
18 to 22	10YR	2/1	100					SILT LOAM	Gravel/pebble
¹ Type: C=Con	centration, [D=Depletion	RM=Reduc	ced Martix, CS=Co	overed or	Coated S	Sand Grai	ins. ² Location: PL=Pore Lining,	M=Matrix.
Hydric Soil I	indicators:		-					Indicators for Problematic Hy	dric Soils: ³
Histosol (A	1)			Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A16)	
Histic Epipe	edon (A2)			Sandy Redox (S5	5)			Iron-Manganese Masses (F12)	
Black Histic	c (A3)			Stripped Matrix (S	6)			Dark Surface (S7)	
Hydrogen S	Sulfide (A4)			Loamy Mucky Mir	neral (F1)				(10)
Stratified La	ayers (A5)			Loamy Gleyed Ma	atrix (F2)				12)
2 cm Muck	(A10)			Depleted Matrix (F3)			└── Other (Explain in Remarks)	
Depleted B	elow Dark Su	rface (A11)	Г	Redox Dark Surfa	ace (F6)				
Thick Dark	Surface (A12)	Γ	Depleted Dark Su	urface (F7)				
Sandy Mud	kv Mineral (S	1)		Redox Depressio	ns (F8)			³ Indicators of hydrophytic vegeta	ation and
5 cm Muck	y Peat or Pea	, t (S3)	L					wetland hydrology must be prese disturbed or problematio	nt, unless 2.
Restrict	ive Layer (if observe	d):						
Type:			-						
Depth (inch	nes):							Hydric Soil Present? Y	es <u>No X</u>
Remarks:								-	
The observed	soil profile faile	ed to display i	ndicators of h	ydric soil.					
HYDROLOG	Ϋ́Υ								
Wetland Hyd	drology Ind	icators:							
Primary Indic	ators (minim	ium of one is	s required; c	heck all that apply	/)			Secondary Indicators (mini	num of two required)
Surface Wa	ater (A1)			Water-Staine	d Leaves (I	B9)		Surface Soil Cracks	(B6)
High Water	r Table (A2)			Aquatic Fauna	a (B13)			Drainage Patterns (I	310)
Saturation	(A3)			True Aquatic	Plants (B14	4)		Dry-Season Water T	able (C2)
Water Mark	ks (B1)			Hydrogen Sul	fide Odor (C1)		Crayfish Burrows (C	8)
Sediment D	Deposits (B2)			Oxidized Rhiz	ospheres a	along Livir	g Roots (C	C3) Saturation Visible or	Aerial Imag.(C9)
Drift Depos	sits (B3)			Presence of F	Reduced Iro	on (C4)		Stunted or Stressed	Plants (D1)
Algal Mat o	or Crust (B4)			Recent Iron R	eduction in	Plowed S	Soils (C6)	Geomorphic Position	ו (D2)
Iron Depos	its (B5)			Thin Muck Su	Irface (C7)			FAC-Neutral Test (D	5)
Inundation	Visible on Ae	ial Imagery (E	37)	Gauge or We	ll Data (D9)			
Sparsely V	egetated Con	cave Surf. (B8)	Other (Explain	n in Remar	ks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	No	X Depth	(inches):				
Water Table	Present?	Yes	No	X Depth	(inches):			Watland Hydrology Procent?	Vac No V
Saturation Pr	resent?	Yes	No	<u>X</u> Depth	(inches):			wettand Hydrology Present?	
Describe Record	ded Data (stre	am gauge, m	onitoring well,	aerial photos, previo	ous inspect	tions), if a	/ailable:		
Remarks:									
The area failed	d to meet wetla	and hydrology	criteria. The	area is elevated abov	ve the adja	cent wetla	nd and wa	iterway.	



Project/Site:	Gretna Bottoms			City/Coun	ty:	Sarpy Cour	nty	Sampling	J Date:	4/28/2	015	
Applicant/Owner	r: Lyman-Riche	y Corporation				State	: NE	Samplin	g Point:	S-09		
Investigators:	Ben Fisher		Austin Zigle	r		Section, Tov	wnship, Range	S 4	T 13N	R	10E	
Landform (hillslo	ope, terrace, etc.):	Depre	ession			Local Rel	lief (concave, c	onvex, no	one): C	oncave		
Slope(%): 0	Lat:	41.1219711	727951	Long:	-96.30652327	80844	Datum:	NAD 198	33			
Soil Map Unit Na	ame: Gibbon lo	amy fine sand	overwash. occ		oded		NWI Classifica	ation: N	one			
Are climatic / hv	drologic conditions	on the site tvp	ical for this time	e of vear?	Yes X	No	(If No. exp	lain in Re	marks)			
Are Vegetation	Soil	Hydrology	significan	tlv disturbed?		Are "Normal	 Circumstances	s" present	? Yes	×	No	
Are Vegetation	, Coil,	Hydrology	, orgriniouri		,					, <u> </u>		
Ale vegetation	, 3011,	Tyurology _	, naturaliy			(If needed,	explain any an	swers in	Remarks	s.)		
SUMMARY	OF FINDINGS	- Attach a	site map sh	owing sar	npling poi	nt locatio	ons, transed	cts, imp	ortant	featu	res, et	с.
Hydrophytic Ve	egetation Present?	Yes X	No	le the S	ampled Area							
Hydric Soil Pre	esent?	Yes X	No	within a	Wetland?		Yes	X No				
Wetland Hydro	ology Present?	Yes X	No									
Remarks:			H									
The area chara	cterized by this data	a form is an iso	olated depressi	on containing	an emergent	wetland. Th	e area displaye	ed indicat	ors of hy	drophyt	ic	
vegetation, nyu	inc sons, and wettar	ia nyarology.										
					<u> </u>							
VEGETATIC	DN – Use scient	ific names o	of plants.	<u>Absolute</u> % Cover	Species	Status	Dominance	Test Wo	rkshoot			
Tree Stratum	ı						Number of I	Dominant	Snecies			
Chrub Stratu	-						That Are Of	BL, FACV	/, or FAC): _	3	(A)
Shrub Stratu	<u>m</u>						Tatal Name					
Herb Stratum	<u>1</u> (Plot size	e: <u>6 Ft</u>	_)				Species Acr	oss all St	inant rata:		3	(B)
Scirpus a	atrovirens				- <u>Y</u>	OBL				_		_ ` `
					- <u>Y</u>	FACW	Percent of D	Dominant	Species		100.0%	(A/B)
Convolvi					N	FACU	That Are OE	BL, FACW	, or FAC			_```
	redowskii				N	FAC	Prevalence	Index W	orkshee	t:		
				100	=Total Cover		Total %	Cover of:		Mult	iply by:	
Vine Stratum	1						OBL species	S	40	x 1 =	40	
	<u> </u>						FACW spec	ies	40	x 2 =	80	
							FAC species	s	10	x 3 =	30	
							FACIL spec	ies	20	x 4 =	80	
									0	x 5 =	0	
							UPL species	s				(D)
							Column Tota	als:	110	_(A)	230	(B)
							Preva	lence Ind	эх = B/A	=	2.09	
							Hydrophytic	Vegetati	on Indic	ators:		
							X Rapid T	est for Hy	[,] drophyti	c Veget	ation	
							X Domina	nce Test	> 50%			
							X Prevale	nce Index	≤ 3.0			
							Morpho	logical Ad		s (Prov	ride sunn	ortina
							data in I	Remarks	or on a s	separate	sheet)	orang
							Problem	natic Hydr	ophytic	√egetat	ion (Exp	olain)
							Indicators of be present,	of hydric s , unless d	oil and v isturbed	vetland or prob	hydrolog ematic.	y must
							Hydropl Vegetation	hytic Present?	Yes	x	No	
Remarks: (Inclu	ide photo numbers	here or on a s	eparate sheet)									
The area displa	ayed dominant hydro	ophytic vegeta	ation.									



Profile Descr	iption: (Des	scribe to the	depth ne	eded to doc	ument the inc	licator or	confirm	the absence of Indicators.)	
Depth		Matrix			Redox Fe	eatures			
(inches)	Colo	r (moist)	%	Color (m	oist) %	Туре	Loc ²	Texture	Remarks
0 to 8	10YR	2/1	100					SILT LOAM	
8 to 18	10YR	2/1	95	7.5YR 4	4/6 5	С	Μ	SILT LOAM	
¹ Type: C=Con	centration, l	D=Depletion,	RM=Red	uced Martix,	CS=Covered c	or Coated	Sand Gra	ins. ² Location: PL=Pore Lining, N	=Matrix.
Hydric Soil I	ndicators:			_				Indicators for Problematic Hyd	Iric Soils: 3
Histosol (A	1)			Sandy Gl	eyed Matrix (S4)			Coast Prairie Redox (A16)	
Histic Epipe	edon (A2)			Sandy Re	dox (S5)			Iron-Manganese Masses (F12)	
Black Histic	c (A3)			Stripped I	Matrix (S6)			Dark Surface (S7)	
Hydrogen S	Sulfide (A4)			Loamy M	ucky Mineral (F1)		Very Shallow Dark Surface (TF1)	2)
Stratified L	ayers (A5)			Loamy G	eyed Matrix (F2)			Other (Explain in Remarks)	,
2 cm Muck	(A10)			Depleted	Matrix (F3)				
Depleted B	elow Dark Su	rface (A11)		Redox Da	ark Surface (F6)				
Thick Dark	Surface (A12	2)		Depleted	Dark Surface (F	7)		3	
Sandy Muc	ky Mineral (S	1)		Redox De	pressions (F8)			Indicators of hydrophytic vegetati wetland hydrology must be present	on and t, unless
5 cm Muck	y Peat or Pea	it (S3)						disturbed or problematic.	,
	ive Layer ((if observe	d):						
Туре:								Hydric Soil Present? Yes	a X No
Depth (inch	nes):								
Remarks:	soil profile me	ets hydric soil	criteria						
			ontoniai						
	187								
HIDKOLOG	r1								
Wetland Hyd	irology Ind	licators:	roquirod	abook oll the	t on all (Cocondory Indicators (minim	up of two required)
			required,						
Surface Wa	ater (A1)			Water	-Stained Leaves	s (B9)		Surface Soil Cracks (E) ()
					lo Fauria (B13) Aquatic Plants (B	(14)		Dry-Season Water Ta	0) ble (C2)
Water Mark	(A3) (s (B1)				gen Sulfide Odo	r (C1)		Cravfish Burrows (C8)	
	Deposits (B2)				ed Rhizospheres	s along Livi	na Roots ((C3) Saturation Visible on A	Verial Imag.(C9)
Drift Depos	sits (B3)			Prese	nce of Reduced	Iron (C4)	5	Stunted or Stressed P	lants (D1)
Algal Mat o	or Crust (B4)			Recer	t Iron Reduction	in Plowed	Soils (C6)	Geomorphic Position (,D2)
Iron Depos	its (B5)			🗌 Thin I	Muck Surface (C	7)		✓ FAC-Neutral Test (D5))
Inundation	Visible on Ae	rial Imagery (B	7)	Gaug	e or Well Data (E	09)			
Sparsely V	egetated Con	cave Surf. (B8)	Other	(Explain in Rem	arks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	1	No <u>X</u>	Depth (inches):				
Water Table	Present?	Yes	1	No X	Depth (inches):			Wetlend Underlager Descent?	
Saturation Pr	resent?	Yes	<u> </u>	No	Depth (inches):		0	wetland Hydrology Present?	
Describe Record	ded Data (stre	eam gauge, mo	onitoring we	ell, aerial photo	s, previous inspe	ections), if a	vailable:		
Remarks:									
The area displa	ayed indicator	rs of wetland h	ydrology.						

Project/Site: Gretna Bottoms		City/Coun	ty:	Sarpy Cour	nty	Sampling D	ate:	4/28/20	15	
Applicant/Owner: Lyman-Richey C	corporation			State	: NE	Sampling F	Point:	S-10		
Investigators: Ben Fisher	Austin Zigler		;	Section, Tov	wnship, Range	S 4 1	Г 13N	R	10E	
Landform (hillslope, terrace, etc.):	Hillslope			Local Rel	lief (concave, co	onvex, none	e): Co	onvex		
Slope(%): 2 Lat: 4	1.1218947199203	Long:	96.306249280	01722	Datum:	NAD 1983				
Soil Map Unit Name: Platte, Inglew	vood,& Barney soils, freque	ently flooded			NWI Classificat	tion: Non	е			
Are climatic / hydrologic conditions on the	the site typical for this time	of year?	Yes X	No	(If No, expla	ain in Rema	arks)			
Are Vegetation, Soil, Hy	/drology, significantl	ly disturbed?	Ą	re "Normal	Circumstances"	present?	Yes	Х	No	
Are Vegetation, Soil, Hy	/drology, naturally p	roblematic?		(If needed,	explain any ans	wers in Re	marks	.)		
SUMMARY OF FINDINGS - A	ttach a site map sho	owing sar	nplina poil	nt locatio	ons. transect	ts. impol	rtant	featu	res. et	c.
Hydrophytic Vegetation Present?	Yes X No									-
Hydric Soil Present?	Yes No X	Is the Sawithin a	ampled Area		X					
Wetland Hydrology Present?	Yes No X	within a	wettand:		Yes	NO	X			
Remarks:										
The area characterized by this data fo vegetation; however, the area failed to	orm is an upland area adjac o meet hydric soil and wetla	ent to the we	etland describe y criteria.	ed in S-09. 1	The area display	ved indicato	ors of h	iydroph	/tic	
VEGETATION- Use scientific	names of plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominance ⁻	Test Works	sheet:			
Tree Stratum					Number of D	ominant Sp	oecies		•	(
Shrub Stratum (Plot size:	15Ft)				That Are OB	L, FACW, c	or FAC	:	2	(A)
Cornus drummondii		20	Y	FAC	Total Numbe	r of Domina	ant			
		20	=Total Cover		Species Acro	ss all Strat	a:		3	(B)
Herb Stratum (Plot size: _	<u>6 Ft</u>)				Percent of Do	ominant Sp	ecies			
Equisetum arvense		70	Y	FAC	That Are OBI	_, FACW, o	r FAC		66.7%	(A/B)
Helianthus annuus		20	Y	FACU	Prevalence I	ndex Work	sheet			
Solidago gigantea			N	FACW	Total % (Cover of:		 Multi	olv by:	
		100	_=Total Cover		OBL species		0	x 1 =	0	
vine Stratum					FACW specie		10	x 2 =	20	
					FAC species		90	x 3 =	270	
					FACU specie	es	20	x 4 =	80	
					UPL species		0	x 5 =	0	
					Column Tota	ls:	120	(A)	370	(B)
					Prevale	ence Index	= <i>B/A</i> =	=	3.08	
					Hydrophytic	Vegetation	Indic	ators:		
					Rapid Te	est for Hydro	ophytic	c Vegeta	ation	
					X Dominan	ce Test > 5	50%	0		
					Prevalen	ce Index ≤	3.0			
					Morpholo	ogical Adap	tations	s (Provi	de supp	orting
					data in R Problema	emarks or atic Hydrop	on a s hytic \	eparate /egetatio	sheet) on (Exp	olain)
					Indicators of be present,	hydric soil unless distu	and w urbed (etland h	ydrolog ematic.	y must
					Hydroph Vegetation P	ytic Present?	Yes	x	No	
Remarks: (Include photo numbers her The area is dominated by hydrophytic	e or on a separate sheet.) vegetation.				J					



Profile Descr	ription: (Des	cribe to the	depth nee	eded to document	the indi	icator or o	confirm t	he absence of Indicators.)	
Depth		Matrix		R	edox Fe	atures			
(inches)	Color	(moist)	%	Color (moist)	%	Type 1	Loc ²	Texture	Remarks
0 to 6	10YR	3/2	100					SILT LOAM	Mixed with gravel
6 to 9	10YR	4/2	98	7.5YR 4/6	2	С	М	SAND	
9 to 12	10YR	2/2	98	7.5YR 4/6	2	С	М	SILT LOAM	
12 to 18	10YR	2/1	98	7.5YR 4/6				SILT LOAM	
¹ Type: C=Cor	ncentration, D	=Depletion,	RM=Redu	ced Martix, CS=Co	overed or	r Coated S	Sand Grai	ins. ² Location: PL=Pore Lining	J, M=Matrix.
Hydric Soil I	Indicators:		Г					Indicators for Problematic I	Hydric Soils: ³
Histosol (A	(1)		L	Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A16)	
Histic Epip	edon (A2)			Sandy Redox (S5	5)			Iron-Manganese Masses (F1	2)
Black Histi	c (A3)		l	Stripped Matrix (S	66)			Dark Surface (S7)	
Hydrogen	Sulfide (A4)			Loamy Mucky Mir	neral (F1)			Ven/ Shallow Dark Surface (TF12)
Stratified L	ayers (A5)		[Loamy Gleyed Ma	atrix (F2)				11 12)
2 cm Muck	(A10)		[Depleted Matrix (F3)			Uther (Explain in Remarks)	
Depleted E	Below Dark Sur	face (A11)	[Redox Dark Surfa	ace (F6)				
Thick Dark	Surface (A12)		[Depleted Dark Su	urface (F7)			
Sandy Mud	cky Mineral (S1)	[Redox Depressio	ns (F8)	,		³ Indicators of hydrophytic vege	etation and
5 cm Muck	y Peat or Peat	(S3)	L					wetland hydrology must be pre disturbed or problema	sent, unless itic.
Restrict	ive I aver (i	if observe	4)·						
Depth (incl	hes):							Hydric Soil Present?	Yes No X
Remarks:									
The observed	soil profile doe	s not meet hy	dric soil crite	ria.					
HYDROLOG	θY								
Wetland Hy	drology Indi	cators:							
Primary Indic	cators (minim	um of one is	required;	check all that apply	/)			Secondary Indicators (mi	nimum of two required)
Surface W	ater (A1)			Water-Stained	d Leaves	(B9)		Surface Soil Crack	<s (b6)<="" td=""></s>
High Wate	r Table (A2)			Aquatic Fauna	a (B13)			Drainage Patterns	(B10)
Saturation	(A3)			True Aquatic I	Plants (B1	14)		Dry-Season Wate	r Table (C2)
U Water Mar	ks (B1)			Hydrogen Sul	fide Odor	(C1)		Crayfish Burrows	(C8)
Sediment [Deposits (B2)			Oxidized Rhiz	ospheres	along Livin	g Roots (C	C3) Saturation Visible	on Aerial Imag.(C9)
Drift Depos	sits (B3)			Presence of R	Reduced In	ron (C4)		Stunted or Stresse	ed Plants (D1)
Algal Mat o	or Crust (B4)			Recent Iron R	eduction i	in Plowed S	Soils (C6)	Geomorphic Posit	ion (D2)
Iron Depos	sits (B5)			Thin Muck Su	irface (C7)		FAC-Neutral Test	(D5)
Inundation	Visible on Aeri	ial Imagery (B	7)	Gauge or We	ll Data (D	9)			
Sparsely V	egetated Conc	ave Surf. (B8))	Other (Explain	n in Rema	arks)			
Field Observ	vations:								
Surface Wat	er Present?	Yes	N	Depth	(inches):				
Water Table	Present?	Yes	N	Depth	(inches):				
Saturation P	resent?	Yes	N	Depth	(inches):			Wetland Hydrology Present?	Yes <u>No X</u>
Describe Recor	ded Data (strea	am gauge, mo	nitoring well	, aerial photos, previo	ous inspe	ctions), if a	/ailable:		
Demortini									
The area failed	d to meet wetla	nd hydroloav	criteria.						
		,							

Project/Site:	Gretna Bottoms		City/Coun	ty:	Sarpy Cour	nty	Sampling Da	ate:	4/28/20	015	
Applicant/Owner	r: Lyman-Riche	y Corporation			State	E NE	Sampling P	oint:	S-11		
Investigators:	Ben Fisher	Austin Zigle	r		Section, Tov	wnship, Range	S 4 T	13N	R	10E	
Landform (hillslo	ope, terrace, etc.):	Depression			Local Rel	lief (concave, c	onvex, none)): Nc	one		
Slope(%): 0	Lat:	41.1237932290505	Long:	-96.30949079	91427	Datum:	NAD 1983				
Soil Map Unit Na	ame: Gibbon lo	amy fine sand, overwash, oco	casionally floo	oded		NWI Classifica	tion: None	;			
Are climatic / hy	drologic conditions	on the site typical for this time	e of year?	Yes X	No	(If No, expl	ain in Rema	rks)			
Are Vegetation	, Soil,	Hydrology, significan	tly disturbed?	· /	Are "Normal	Circumstances	" present?	Yes	Х	No	
Are Vegetation	, Soil,	Hydrology, naturally	problematic?		(If needed,	explain any an	swers in Rer	marks	.)		
SUMMARY	OF FINDINGS	- Attach a site map sh	owing sa	nplina poi	nt locatio	ons. transec	ts. impor	tant	featu	res. et	c.
Hydrophytic Ve	egetation Present?	Yes No X									
Hydric Soil Pre	esent?	Yes No X	Is the S within a	ampled Area		Vee	Na	v			
Wetland Hydro	ology Present?	Yes X No	within t	i Welland .		res	NO		-		
Remarks:											
The area chara failed to meet h	acterized by this data hydric soil and hydro	a form is an upland area in ar ophytic vegetation criteria.	n agricultural	field. The area	ı displayed ir	ndicators of we	tland hydrolc	ogy; ho	wever,	, the area	а
VEGETATIC	DN – Use scient	ific names of plants.	Absolute <u>% Cover</u>	Dominant Species	Indicator Status	Dominance	Test Works	heet:			
Tree Stratum	<u>1</u>					Number of E	Dominant Sp	ecies			(
Shrub Stratu	<u>m</u>					That Are OE	BL, FACW, o	r FAC	: _	1	(A)
Herb Stratum	<u>n</u> (Plot siz	e: 6 Ft)				Total Numbe	er of Domina	nt			
Digitaria	sanguinalis	,	20	Y	FACU	Species Acro	oss all Strata	1:		3	(B)
Equisetu	ım hyemale		20	Y	FACW	Percent of D	ominant Spe	ecies		00.00/	
Plantago	o virginica		10	Y	FACU	That Are OB	L, FACW, or	FAC:		33.3%	_(A/B)
N# 0			50	=Total Cover		Prevalence	Index Work	sheet	:		
Vine Stratum	<u>1</u>					Total %	Cover of:		Multi	ply by:	
						OBL species	;	0	x 1 =	0	
						FACW speci	es 2	20	x 2 =	40	
						FAC species	; (0	x 3 =	0	
						FACU speci	es 3	30	x 4 =	120	
						UPL species	(0	x 5 =	0	
						Column Tota	als:	50	(A)	160	(B)
						Preval	ence Index =	= <i>B/</i> A=	=	3.20	
						Hvdrophytic	Vegetation	Indica	ators:		
						Rapid Te	est for Hydro	ophytic	: Veget	ation	
						Dominar	nce Test > 5	0%	•		
						Prevaler	nce Index ≤ 3	3.0			
						Morphol data in F	ogical Adapt Remarks or c	ations	; (Prov	ide supp sheet)	orting
						Problem	atic Hydroph	nytic V	egetati	on (Exp	plain)
						Indicators o be present,	f hydric soil a unless distu	and wo	etland I or probl	nydrolog ematic.	y must
						Hydroph Vegetation I	nytic Present?	Yes		No)	K
Remarks: (Inclu The area fails t	ude photo numbers o meet hydrophytic	here or on a separate sheet.) vegetation criteria.									



Profile Descript	ion: (Des	scribe to the	depth ne	eeded to do	cument	the indic	cator or	confirm	the absence of Indicators.)
Depth (inches)	Colo	r (moist)	%	Color (r	noist)	800×1 ea	Type 1	Loc ²	- Texture Remarks
0 to 4	10YR	3/1	100		,				SILT LOAM
4 to 12	10YR	6/2	100						COARSE SAND
¹ Type: C=Concer	ntration, I	D=Depletion,	RM=Rec	luced Martix,	CS=Co	overed or	Coated S	Sand Gra	rains. Location: PL=Pore Lining, M=Matrix.
Hydric Soil Ind	icators:								Indicators for Problematic Hydric Soils: ³
Histosol (A1)				Sandy G	leyed Ma	atrix (S4)			Coast Prairie Redox (A16)
Histic Epipedo	on (A2)			Sandy R	edox (S5	;)			Iron-Manganese Masses (F12)
Black Histic (A	(3)			Stripped	Matrix (S	6)			Dark Surface (S7)
Hydrogen Sulf	ide (A4)			Loamy M	lucky Mir	neral (F1)			Very Shallow Dark Surface (TE12)
Stratified Laye	ers (A5)			Loamy G	Bleyed Ma	atrix (F2)			
2 cm Muck (A	10)			Depleted	l Matrix (I	F3)			Other (Explain in Remarks)
Depleted Below	w Dark Su	rface (A11)		Redox D	ark Surfa	ace (F6)			
Thick Dark Su	rface (A12)		Depleted	I Dark Su	Irface (F7)			2
Sandy Mucky	Mineral (S	1)		Redox D	epressio	ns (F8)			Indicators of hydrophytic vegetation and wetland hydrology must be present unless
5 cm Mucky P	eat or Pea	t (S3)							disturbed or problematic.
Restrictive	e Layer ((if observe	d):						
Type: Coars	se Sand								Hydric Soil Present? Yes No X
Depth (inches)):12	2							
HYDROLOGY Wetland Hydro	blogy Ind	icators:	required	: check all th	atapply)			Secondary Indicators (minimum of two required)
	· (Δ1)			Wate	er-Stainer	/ d Leaves (F	B9)		
High Water Ta	able (A2)			Aqua	tic Fauna	a (B13)	,		Drainage Patterns (B10)
Saturation (A3	3)			True	Aquatic F	Plants (B14	4)		Dry-Season Water Table (C2)
Water Marks (B1)			Hydro	ogen Sulf	fide Odor (C1)		Crayfish Burrows (C8)
Sediment Dep	osits (B2)			Oxidi	zed Rhiz	ospheres a	along Livir	ng Roots ((C3) Saturation Visible on Aerial Imag.(C9)
Drift Deposits	(B3)			Prese	ence of R	Reduced Iro	on (C4)		Stunted or Stressed Plants (D1)
Algal Mat or C	rust (B4)				nt Iron R	eduction in	Plowed S	Soils (C6)) Geomorphic Position (D2)
Iron Deposits ((B5)		-		Muck Su	Irface (C7)			FAC-Neutral Test (D5)
Inundation Vis	ible on Ae	rial Imagery (B	57) \		ge or Wel	II Data (D9)		
		cave Surf. (B8)		r (Explair	n in Remar	KS)		
Field Observati	lons:				Denth	(
Surface Water P	resent?	Yes		NO <u>X</u>	Depth	(inches):			-
Saturation Prese	esent?	Yes			Depth	(inches):		urface	Wetland Hydrology Present? Yes X No
Describe Recorded	I Data (stre	eam gauge, mo	onitoring w	ell, aerial photo	os, previc	ous inspect	tions), if a	vailable:	
Remarks: The area displaye	d indicator	s of wetland h	ydrology.						

Project/Site: Gretna Bottoms		City/Count	y:	Sarpy Cour	ity	Sampling Da	ate: _4	4/28/20	15	
Applicant/Owner: Lyman-Richey Cor	rporation			State	: NE	Sampling Po	oint:	S-12		
Investigators: Ben Fisher	Austin Zigler		:	Section, Tov	vnship, Range	S 4 T	13N	R 1	I0E	
Landform (hillslope, terrace, etc.):	Hillslope			Local Rel	ief (concave, co	onvex, none)): No	ne		
Slope(%): 2 Lat: 41.	118754625402	Long: -	96.30936603	50141	Datum:	NAD 1983				
Soil Map Unit Name:Gibbon loamy f	fine sand, overwash, occa	sionally floo	ded		NWI Classifica	tion: None	;			
Are climatic / hydrologic conditions on the	e site typical for this time	of year?	Yes X	No	(If No, expl	ain in Remai	rks)			
Are Vegetation, Soil, Hyde	rology, significantly	/ disturbed?	A	Are "Normal	Circumstances'	present?	Yes	Х	No	
Are Vegetation, Soil, Hyde	rology, naturally pr	oblematic?		(If needed,	explain any ans	swers in Rer	narks.))		
SUMMARY OF FINDINGS - Att	tach a site map sho	wing san	npling poi	nt locatio	ns, transec	ts, impor	tant f	eatur	es, et	c.
Hydrophytic Vegetation Present? Y	Yes X No				•	•				
Hydric Soil Present?	Yes X No	Is the Sa within a	ampled Area Wetland?		Vos	No	v			
Wetland Hydrology Present?	Yes No X				165	NO	^	-		
Remarks:										
The area characterized by this data form hydric soil; however, the area failed to m	n is an upland area on the neet wetland hydrology cr	e edge of an iteria.	agricultural fie	eld. The area	a displayed indi	cators of hyd	Jrophy	tic veg	etation a	ind
		Absoluto	Dominant	Indicator						
VEGETATION Use scientific n	names of plants.	<u>% Cover</u>	Species	Status	Dominance	Test Works	heet:			
Tree Stratum					Number of D That Are OB	Dominant Spe L, FACW, or	ecies r FAC:		1	(A)
Snrub Stratum					Total Number					
Herb Stratum (Plot size: <u>6</u>	<u>Ft</u>)	100	V		Species Acro	or of Dominal	חד ג:		1	(B)
		100	Tatal Cauer	FACW	-					_
Vine Stratum			_=rotar Cover		Percent of De That Are OB	ominant Spe L, FACW, or	cies FAC:		100.0%	_(A/B)
					Prevalence	Index Works	sheet:			
					Total %	Cover of:		Multi	oly by:	
					OBL species	(0	x 1 =	0	
					FACW specie	es1(00	x 2 =	200	
					FAC species	. (0	x 3 =	0	
					FACU speci	es(0	x 4 =	0	
					UPL species	(0	x 5 =	0	
					Column Tota	ıls:1	100	(A)	200	<u>(</u> B)
					Prevale	ence Index =	= B/A=		2.00	
					Hydrophytic	Vegetation	Indica	tors:		
					X Rapid Te	est for Hydro	phytic	Vegeta	ation	
					X Dominar	nce Test > 50	0%			
					X Prevaler	nce Index ≤ 3	3.0			
					Morphole data in R	ogical Adapt Remarks or o	ations on a se	(Provi parate	de supp sheet)	orting
					Problem	atic Hydroph	iytic Ve	egetatio	on (Exp	olain)
					Indicators of be present,	f hydric soil a unless distu	and we rbed o	etland h r proble	ydrolog ematic.	y must
					Hydroph Vegetation F	nytic Present?	Yes	x	No	
Remarks: (Include photo numbers here The area displayed dominant hydrophyti	or on a separate sheet.) tic vegetation.				1					



Profile Description: (Describe to the	depth needeo	d to document	the indi	cator or o	confirm t	he absence of Indicators.)	
Depth Matrix	0/	K Color (moiot)		atures	1002	Toyturo	Bomorko
			70	Type	LUC 2		Remarks
0 to 4 10YR 4/2	100				<u> </u>		
4 to 22 10YR 3/1	95	7.5YR 4/6	5	C	M	SILTY SAND	
22 to 26 10YR 2/1	100		<u> </u>		<u> </u>	SILTY SAND	
Type: C=Concentration, D=Depletion	RM=Reduced	Martix, CS=Co	overed or	Coated S	and Grai	ins. 4Location: PL=Pore Lining, N	I=Matrix.
Hydric Soil Indicators:						Indicators for Problematic Hyd	lric Soils: ³
Histosol (A1)		Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A16)	
Histic Epipedon (A2)	✓ :	Sandy Redox (S5	i)			Iron-Manganese Masses (F12)	
Black Histic (A3)		Stripped Matrix (S	6)			Dark Surface (S7)	
Hydrogen Sulfide (A4)		Loamy Mucky Mir	neral (F1)				2)
Stratified Layers (A5)		Loamy Gleyed Ma	atrix (F2)				2)
2 cm Muck (A10)		Depleted Matrix (I	F3)			└── Other (Explain in Remarks)	
Depleted Below Dark Surface (A11)		Redox Dark Surfa	ace (F6)				
Thick Dark Surface (A12)		Depleted Dark Su	Inface (F7)	1			
Sandy Mucky Mineral (S1)		Redox Depression	ns (FR)			³ Indicators of hydrophytic vegetation	on and
5 cm Mucky Peat or Peat (S3)		Tedox Depression	13 (1 0)			wetland hydrology must be present disturbed or problematic.	t, unless
Restrictive Laver (if observe	d):						
	 ,.						
Depth (inches):						Hydric Soil Present? Yes	s X No
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is	s required: che	ck all that apply	0			Secondary Indicators (minim	um of two required)
		Water Stainer		BO)			
L Surface Water (A1)	Ĺ		Leaves (B9)			0)
	Ĺ		2 (D13) Plante (B1	4)		Dry-Season Water Tal	o) ble (C2)
Water Marks (B1)	ſ	Hvdrogen Sulf	fide Odor) (C1)		Cravfish Burrows (C8)	(02)
Sediment Deposits (B2)	[Oxidized Rhiz	ospheres	along Livin	a Roots (C	C3) Saturation Visible on A	Aerial Imag.(C9)
Drift Deposits (B3)	[Presence of R	Reduced Ir	on (C4)	9	Stunted or Stressed P	lants (D1)
Algal Mat or Crust (B4)	[Recent Iron R	eduction i	n Plowed S	oils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)	[Thin Muck Su	Irface (C7))	. ,	✓ FAC-Neutral Test (D5)	
Inundation Visible on Aerial Imagery (E)	37)	Gauge or We	ll Data (D9	9)			
Sparsely Vegetated Concave Surf. (B8) [Other (Explain	n in Rema	rks)			
Field Observations:							
Surface Water Present? Yes	No	X Depth	(inches):				
Water Table Present? Yes	No	X Depth	(inches):				
Saturation Present? Yes	No	X Depth	(inches):			Wetland Hydrology Present?	Yes No_X
Describe Recorded Data (stream gauge, m	onitoring well, ae	rial photos, previo	ous inspec	tions), if av	ailable:		
Remarks: The area failed to meet wetland hydrology	criteria.						

Project/Site:	Gretna Bottoms			City/Cou	nty:		Sarpy Cour	nty	Sam	pling Date:	4/28/2	015	
Applicant/Owner	r: Lyman-Riche	y Corporation					State	: NE	San	npling Point:	S-13		
Investigators:	Ben Fisher		Austin Zigl	er			Section, Tov	wnship, Rang	e SS	9 T 13N	R	10E	
Landform (hillslo	ppe, terrace, etc.):	Depre	ession				Local Re	lief (concave,	conve	x, none): C	oncave		
Slope(%): 0	Lat:	41.1178722	949842	Long:	-96.309	15235	47569	Datum:	NAE	0 1983			
Soil Map Unit Na	ame: Gibbon loa	amy fine sand	, overwash, oo	casionally flo	oded			NWI Classifi	cation:	None			
Are climatic / hyd	drologic conditions	on the site typ	ical for this tim	e of year?	Yes	Х	No	(If No, ex	cplain i	n Remarks)			
Are Vegetation	, Soil,	Hydrology _	, significa	ntly disturbed	?	A	Are "Normal	Circumstanc	es" pre	sent? Yes	Х	No	
Are Vegetation	, Soil,	Hydrology _	, naturally	problematic	?		(If needed,	explain any a	answer	s in Remarks	.)		
SUMMARY	OF FINDINGS	- Attach a	site map sl	nowing sa	mpling	g poi	nt locatio	ons, transe	ects,	important	featu	res, et	c.
Hydrophytic Ve	egetation Present?	Yes X	No					t				•	
Hydric Soil Pre	esent?	Yes X	No	Is the within	Sampled	Area		Vaa	v	Na			
Wetland Hydro	ology Present?	Yes X	No		a mona			res	^		_		
Remarks:													
The area charac vegetation, hydr	cterized by this data ric soils, and wetlar	a form is an er nd hydrology.	mergent wetlar	nd located in	a ditch n	orth of	Capehart R	oad. The are	a displ	ayed indicato	rs of hy	/drophyti	с
VEGETATIC)N _ Use scienti	ific names o	of plants.	Absolute % Cover	Domin Spec	nant_ sies	Indicator Status	Deminen		Werkeheet			
Tree Stratum	1			<u>// 00101</u>	0000		oluluo	Number o	f Domi	nant Species			
Shrub Stratu	- m							That Are (OBL, F	ACW, or FAC	: _	3	(A)
Horb Stratum	<u></u>	6.51	,					Total Num	bor of	Dominant			
Carey fer	L (PIOT SIZE	e: <u>6 Ft</u>	_)	50		v	FACW	Species A	cross a	all Strata:		3	(B)
Phalaris	arundinacea			30		Y	FACW	-			_		_
Rumex c	rispus			20		Y	FAC	 Percent of That Are C 	Domir DBL. F/	ant Species	:	100.0%	(A/B)
				100	=Total	Cover			· · ·	· · · · ·			
Vine Stratum	<u> </u>							Prevalenc	e Inde	x Workshee			
									% Cove	er of:	Mult	iply by:	
								OBL speci	es	80	x2-	160	
								FACW Spe	ecles	20	x 3 -	60	
									es	0	x 4 =	0	
								FACU Spe	ecies	0	x 5 =	0	
								UPL speci	es	400		000	(D)
								Column To	otals:	100	(A)	220	(B)
								Prev	alence	Index = B/A	-	2.20	
								Hydrophyt	ic Veg	etation Indic	ators:		
								Rapid	Test fo	or Hydrophyti	c Veget	ation	
								X Domir	nance 7	Fest > 50%			
								X Preva	lence l	ndex ≤ 3.0			
								Morph data ir Proble	ologica n Rema ematic	al Adaptations arks or on a s Hydrophytic \	s (Prov eparate /egetati	ride supp e sheet) ion (Exp	porting
								Indicators be preser	s of hyc nt, unle	Iric soil and w ss disturbed	etland or probl	hydrolog lematic.	ly must

The area displayed dominant hydrophytic vegetation.



(inches) Color (mo	oist)	%	Color (moist) %	Type 1	Loc 2	Texture	Remarks
(intended)	2/1	100		/	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		SILTIOAM	
to 18 10YR	3/1	95	7 5YR 4/6	5	<u> </u>	M	SILTLOAM	
vpe: C=Concentration. D=De	epletion. I	RM=Redu	ced Martix. CS=	Covered or	Coated	Sand Gra	ins. ² Location: PL=Pore Lining	. M=Matrix.
vdric Soil Indicators:								
Histosol (A1)		[Sandy Gleyed	Matrix (S4)			Indicators for Problematic H	lydric Soils: ⁹
Histic Epipedon (A2)		-	Sandy Redox	(85)			Coast Prairie Redox (A16)	
Black Histic (A3)		[Stripped Matri	(00) x (S6)			Iron-Manganese Masses (F12	2)
Hydrogon Sulfido (A4)		ſ		Minoral (E1)			Dark Surface (S7)	
		l ſ					Very Shallow Dark Surface (T	F12)
		L		i Mallix (FZ)			Other (Explain in Remarks)	
□ 2 cm Muck (A10)		l	Depleted Matr	ix (F3)				
Depleted Below Dark Surface	e (A11)	l	✓ Redox Dark S	urface (F6)				
☐ Thick Dark Surface (A12)		l	Depleted Dark	Surface (F7))		3 Indicators of hydrophytic years	tation and
Sandy Mucky Mineral (S1)		[Redox Depres	sions (F8)			wetland hydrology must be pres	sent, unless
5 cm Mucky Peat or Peat (S3))						disturbed or problemat	tic.
Restrictive Layer (if o	bserved):						
Туре:							Hydric Soil Present?	Ves X No
Depth (inches)								IES A NU
Pepin (incres): emarks: The observed soil profile meets h YDROLOGY	ydric soil c	riteria.						
Pepin (incres): emarks: The observed soil profile meets h YDROLOGY Yetland Hydrology Indicators Primary Indicators (minimum)	ydric soil c ors:	riteria.	check all that ar				Secondary Indicators (min	himum of two require
	ydric soil c ors: of one is i	riteria.	check all that ap	pply) ined Leaves ()	B9)		Secondary Indicators (min	nimum of two require
	ydric soil c ors: of one is i	riteria.	check all that ap	oply) ined Leaves (l iuna (B13)	B9)		Secondary Indicators (min Surface Soil Crack Drainage Patterns	nimum of two require s (B6) (B10)
	ydric soil c ors: of one is i	riteria.	check all that ap	oply) ined Leaves (inuna (B13) tic Plants (B14	B9) 4)		Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water	nimum of two require s (B6) (B10) Table (C2)
Depth (incres):	ydric soil c ors: of one is i	riteria.	check all that ap	oply) ined Leaves (l iuna (B13) tic Plants (B1 Sulfide Odor (B9) 4) (C1)		Secondary Indicators (min Surface Soil Crack: Drainage Patterns Dry-Season Water Crayfish Burrows (f	nimum of two require s (B6) (B10) Table (C2) C8)
	ors: of one is i	riteria.	check all that ap Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F	oply) ined Leaves (uuna (B13) tic Plants (B14 Sulfide Odor (Rhizospheres a	(C1) along Livir	ng Roots (Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (f Saturation Visible of Saturation Visible of	nimum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9)
	ydric soil c ors: of one is i	riteria.	check all that ap Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence	oply) ined Leaves (una (B13) tic Plants (B14 Sulfide Odor (Rhizospheres a of Reduced Ind	(B9) 4) (C1) along Livir on (C4)	ng Roots (Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (f Saturation Visible o Stunted or Stresse	nimum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1)
	ydric soil c ors: of one is i	riteria.	check all that ap Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro	oply) ined Leaves (I iuna (B13) tic Plants (B1/ Sulfide Odor (Rhizospheres a of Reduced Iro n Reduction ir	B9) 4) (C1) along Livir on (C4) n Plowed S	ng Roots (Soils (C6)		nimum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2)
	ydric soil c ors: of one is i	riteria.	check all that ap Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized R Presence Recent Iro	oply) ined Leaves (inuna (B13) tic Plants (B1- Sulfide Odor (Rhizospheres a of Reduced Iro n Reduction ir Surface (C7)	B9) 4) (C1) along Livir on (C4) n Plowed S	ng Roots (Soils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (t Saturation Visible of Stunted or Stresse Geomorphic Positic FAC-Neutral Test (nimum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) (D5)
Depth (incres): emarks: rhe observed soil profile meets h YDROLOGY Vetland Hydrology Indicator Primary Indicators (minimum) 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 In	ors: of one is i	riteria. required; (check all that ap Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck Gauge of	oply) ined Leaves (i inuna (B13) tic Plants (B14 Sulfide Odor (Rhizospheres a of Reduced Iro n Reduction ir s Surface (C7) Well Data (D9	(B9) 4) (C1) along Livir on (C4) n Plowed S) 3)	ng Roots (Soils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (t Saturation Visible of Stunted or Stresse Geomorphic Positio FAC-Neutral Test (nimum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) (D5)
	ydric soil c ors: of one is i nagery (B7 Surf. (B8)	riteria.	check all that ap Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Gauge or Other (Exp	oply) ined Leaves (l una (B13) tic Plants (B1 Sulfide Odor (Rhizospheres a of Reduced Iro n Reduction ir Surface (C7) Well Data (D9 olain in Remar	B9) 4) (C1) along Livir on (C4) n Plowed S)) rks)	ng Roots (Soils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (f Saturation Visible of Saturation Visible of Stunted or Stresse ✔ Geomorphic Positio ✔ FAC-Neutral Test (f	nimum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) (D5)
Depth (incres): emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicator Primary Indicators (minimum 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 In Sparsely Vegetated Concave Teld Observations:	nagery (B7 Surf. (B8)	riteria. required; (check all that ap U Water-Sta Aquatic Fa Aquatic Fa C True Aqua Hydrogen Oxidized F Presence Recent Iro Recent Iro Gauge or Other (Exp	oply) ined Leaves (uuna (B13) tic Plants (B14 Sulfide Odor (Rhizospheres a of Reduced Iro n Reduction ir s Surface (C7) Well Data (D9 olain in Remar	(B9) 4) (C1) along Livir on (C4) n Plowed S) 3) rks)	ng Roots (Soils (C6)	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (t C3)Saturation Visible of Stunted or Stresse ✔ Geomorphic Positio ↓ FAC-Neutral Test (nimum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) (D5)
Depth (incres): emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicator Primary Indicators (minimum 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 In Sparsely Vegetated Concave Teld Observations: Surface Water Present?	nagery (B7 Surf. (B8)	riteria.	check all that ap Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized R Presence of Recent Iro Gauge or Other (Exp o _X Dep	oply) ined Leaves (inuna (B13) tic Plants (B1- Sulfide Odor (Shizospheres a of Reduced Iro n Reduction ir Surface (C7) Well Data (D9 olain in Remar	B9) 4) (C1) along Livir on (C4) n Plowed S)) rks)	ng Roots (Soils (C6)		nimum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) (D5)
Depth (incres): emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicate Primary Indicators (minimum) 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 In Sparsely Vegetated Concave ield Observations: Surface Water Present? Water Table Present?	ydric soil c ors: of one is i nagery (B7 Surf. (B8) Yes Yes	riteria.	check all that ap Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence G Recent Iro Thin Muck Gauge or Other (Explored for the form of the form	oply) ined Leaves (una (B13) tic Plants (B1- Sulfide Odor (Rhizospheres a of Reduced Iro n Reduction ir Surface (C7) Well Data (D9 olain in Remar oth (inches):	(B9) 4) (C1) along Livir on (C4) n Plowed S)) rks)	ng Roots (Soils (C6)		nimum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) (D5)
Depth (incres): emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicate Primary Indicators (minimum) Surface Water (A1) High Water Table (A2) Z Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial In Sparsely Vegetated Concave Yeld Observations: Surface Water Present? Water Table Present? Saturation Present?	nagery (B7 Surf. (B8) Yes Yes Yes	riteria.	check all that ap Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck Gauge or Other (Exponent) Other (Exponent) x Dep x Dep	oply) ined Leaves (I una (B13) tic Plants (B1- Sulfide Odor (Rhizospheres a of Reduced Iro n Reduction ir Surface (C7) Well Data (D9 olain in Remar oth (inches): oth (inches):	B9) 4) (C1) along Livir on (C4) n Plowed S)) rks)	ng Roots (Soils (C6)	Secondary Indicators (min Surface Soil Crack: Drainage Patterns Dry-Season Water Crayfish Burrows (r Saturation Visible of Saturation Visible of Stunted or Stresses ✔ Geomorphic Positio ✔ FAC-Neutral Test (r Wetland Hydrology Present?	himum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) (D5) Yes _X_ No
Depth (incres): emarks: The observed soil profile meets h YDROLOGY Vetland Hydrology Indicator Primary Indicators (minimum 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 In Sparsely Vegetated Concave ield Observations: Surface Water Present? Water Table Present? Saturation Present? Saturation Present?	nagery (B7 Surf. (B8) Yes Yes Yes gauge, mor	riteria.	check all that ap Water-Sta Aquatic Fa True Aqua Hydrogen Oxidized R Presence R Presence R Gauge or Other (Exponent) Other (Exponent) O X Depo X Depo I, aerial photos, pr	oply) ined Leaves (uuna (B13) tic Plants (B14 Sulfide Odor (thizospheres a of Reduced Iro n Reduction ir Surface (C7) Well Data (D9 olain in Remar oth (inches): oth (inches): oth (inches): evious inspec	B9) (C1) along Livir on (C4) n Plowed S)) rks) 	ng Roots (Soils (C6) 4 vailable:	Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (t C3)Saturation Visible of Stunted or Stresse ✓Geomorphic Positio ✓FAC-Neutral Test (t 	himum of two requires s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) (D5) Yes <u>X</u> No
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Applicant/Owner: Lyman-Richey Corporation State: NE Sampling Point: S-14 Investigators: Ben Fisher Austin Zigler Section, Township, Range S 4 T 13N R 10E .andform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): Convex Slope(%): 2 Lat: 41.1185559387498 Long: -96.3062161824024 Datum: NAD 1983 Soil Map Unit Name: Gibbon loamy fine sand, overwash, occasionally flooded NWI Classification: None Ve degetation , Soil , Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes X No SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No X Hydrophytic Vegetation Present? Yes No X Vetanak: No X No X Ne catacharacterized by this data form is an upland area located on the edge of an agricultural field. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. VEGETATION_ Use scientific names of plants. Absolute Dominant Micator Shrub Stratum (Plot size: 6 Ft)) Cover Sizels Sizels Shrub Stratum (Plot size: 6 Ft)) (A) Total Number of Dominant Beries Across all Strata: 1 (B)
Investigators: Ben Fisher Austin Zigler Section, Township, Range S 4 T 13N R 10E Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): Convex Slope(%): 2 Lat: 41.1185559387498 Long: -96.3062161824024 Datum: NAD 1983 Soil Map Unit Name: Gibbon loamy fine sand, overwash, occasionally flooded NWI Classification: None Ver eclimatic / hydrologic conditions on the site typical for this time of year? Yes X No (If No, explain in Remarks) Vre Vegetation , Soil , Hydrology , significantly disturbed? Are "Normal Circumstances" present? Yes X No Ure Vegetation , Soil , Hydrology , naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrosolity Vegetation Present? Yes No X Hydrosolity Present? Yes No X Vers No X Hydrosolity Present? Yes No X Is the Sampled Area within a Wetland? Yes No X </td
Landform (hillslope, terrace, etc.): Hillslope Local Relief (concave, convex, none): Convex Slope(%): 2 Lat: 41.1185559387498 Long:96.3062161824024 Datum: NAD 1983 Soil Map Unit Name: Gibbon loamy fine sand, overwash, occasionally flooded NWI Classification: None Ver elimatic / hydrologic conditions on the site typical for this time of year? Yes X No (If No, explain in Remarks) Vre Vegetation _, Soil _, Hydrology _, significantly disturbed? Are "Normal Circumstances" present? Yes X No SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrology Present? Yes No X Hydrology Present? Yes No X No X Wetland Hydrology Present? Yes No X X No X VegeTATION_ Use scientific names of plants. Absolute Dominant Species Indicator Species Dominance Test Worksheet: That Are OBL, FACW, or FAC: 1 (A) Herb Stratum Shrub Stratum (Plot size: 6 Ft) 100 Y FACW Total Number of Dominant Species All S
Slope(%): 2 Lat: 41.1185559387498 Long: -96.3062161824024 Datum: NAD 1983 Soil Map Unit Name: Gibbon loamy fine sand, overwash, occasionally flooded NWI Classification: None Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If No, explain in Remarks) Are Vegetation _, Soil _, Hydrology _, significantly disturbed? Are "Normal Circumstances" present? Yes X No SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrohytic Vegetation Present? Yes No
Soil Map Unit Name: Gibbon loamy fine sand, overwash, occasionally flooded NWI Classification: None Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If No, explain in Remarks) Are Vegetation
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If No, explain in Remarks) Are Vegetation _, Soil _, Hydrology _, significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation _, Soil _, Hydrology _, naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No Hydrosoil Present? Yes No X Vestand Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X No X No X No X Wetland hydrology; however, the area met hydrophytic vegetation criteria. VEGETATION- Use scientific names of plants. Absolute <u>Absolute <u>Shrub Stratum</u> (Plot size: <u>6 Ft</u>) Equisetum hyemale 100 Y FACW FACW Kex Indicator (Plot size: <u>6 Ft</u>) 100 Y FACW</u>
Are Vegetation, Soil, Hydrology, significantly disturbed? Are "Normal Circumstances" present? YesX No Are Vegetation, Soil, Hydrology, naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Yet and Hydrology Present? Yes No Yes No Is the Sampled Area within a Wetland? Yes No Yes No Remarks: The area characterized by this data form is an upland area located on the edge of an agricultural field. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. VEGETATION Use scientific names of plants. Absolute Dominant Species Status Dominant Mumber of Dominant Species
Are Vegetation, Soil, Hydrology, naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? YesNo Hydric Soil Present? YesNo Wetland Hydrology Present? YesNo No Is the Sampled Area within a Wetland? YesNo No Remarks: The area characterized by this data form is an upland area located on the edge of an agricultural field. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. VEGETATION Use scientific names of plants. AbsoluteYec Dominant
SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No X Hydric Soil Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Remarks: The area characterized by this data form is an upland area located on the edge of an agricultural field. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. Dominant Indicator VEGETATION- Use scientific names of plants. Absolute Dominant Indicator Shrub Stratum (Plot size: 6 Ft) 100 Y FACW Total Number of Dominant Species 1 (B)
Hydrophytic Vegetation Present? Yes X No X Hydrophytic Vegetation Present? Yes No X Wetland Hydrology Present? Yes No X Vetland Hydrology Present? Yes No X Remarks: The area characterized by this data form is an upland area located on the edge of an agricultural field. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. VEGETATION Use scientific names of plants. Absolute % Cover Dominant Species Indicator Status Dominant Species That Are OBL, FACW, or FAC: (A) Herb Stratum (Plot size: 6 Ft) 100 Y FACW Total Number of Dominant Species Across all Strata: (B)
Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X Yes No X Remarks: The area characterized by this data form is an upland area located on the edge of an agricultural field. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. VEGETATION- Use scientific names of plants. Absolute % Cover Dominant Species Indicator Status Dominance Test Worksheet: Number of Dominant Secies Number of Dominant Species 1 (A) Herb Stratum (Plot size: 6 Ft) 100 Y FACW
Wetland Hydrology Present? Yes No X Remarks: The area characterized by this data form is an upland area located on the edge of an agricultural field. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. VEGETATION_ Use scientific names of plants. Absolute y/0 Cover Dominant y/2 Status Dominance Test Worksheet: Iree Stratum Shrub Stratum Indic stratum Number of Dominant Species 1 (A) Herb Stratum (Plot size: 6 Ft) 100 Y FACW Total Number of Dominant Species Across all Strata: 1 (B)
Remarks: The area characterized by this data form is an upland area located on the edge of an agricultural field. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. VEGETATION_ Use scientific names of plants. Absolute % Cover Dominant % Species Indicator % Status Tree Stratum % Cover Shrub Stratum Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Herb Stratum (Plot size: 6 Ft) 100 Y FACW Total Number of Dominant Species Across all Strata: 1 (B)
The area characterized by this data form is an upland area located on the edge of an agricultural field. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. VEGETATION_ Use scientific names of plants. Absolute % Cover Dominant Species Indicator <u>Tree Stratum</u> Shrub Stratum Number of Dominant Species 1 (A) Herb Stratum (Plot size: 6 Ft) 100 Y FACW Total Number of Dominant Species all Strata: 1 (B)
Wetland hydrology; however, the area met hydrophytic vegetation criteria. VEGETATION_ Use scientific names of plants. Absolute % Cover Dominant Species Indicator Tree Stratum Shrub Stratum Herb Stratum (Plot size: _ 6 Ft) Equisetum hyemale Indicator Dominant Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
VEGETATION Use scientific names of plants. Absolute % Cover Dominant Species Indicator <u>Tree Stratum</u> Shrub Stratum Number of Dominant Species 1 (A) Herb Stratum (Plot size: 6 Ft) 100 Y FACW Total Number of Dominant Species all Strata: 1 (B)
VEGETATION_ Use scientific names of plants. Absolute % Cover Dominant Species Indicator <u>Tree Stratum</u>
Tree Stratum Number of Dominant Species Shrub Stratum (Plot size: 6 Ft) Equisetum hyemale 100 Y
Shrub Stratum Plot size: 6 Ft) 100 Y FACW Total Number of Dominant Species Across all Strata: 1 (B)
Herb Stratum (Plot size: 6 Ft) Total Number of Dominant Equisetum hyemale 100 Y FACW Species Across all Strata: 1 (B)
Equisetum hyemale 100 Y FACW Protection Advantage of Dominant Species Across all Strata: 1 (B)
Vine Stratum Percent of Dominant Species 100.0% (A/B)
Prevalence Index Worksheet:
Total % Cover of: Multiply by:
OBL species $100 \times 7 = 200$
Column Totals:(A)(B)
Prevalence Index = B/A= 2.00
Hydrophytic Vegetation Indicators:
X Rapid Test for Hydrophytic Vegetation
X Dominance Test > 50%
X Prevalence Index \leq 3.0
Morphological Adaptations (Provide supporting
data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain)
Indicators of bydric soil and wetland bydrology must
be present, unless disturbed or problematic.
Hydrophytic Vegetation Present? Yes X No
Remarks: (Include photo numbers here or on a separate sheet.)



Dopth Matr	ix	Ri	edox⊢ea	tures		· · · · · · · · · · · · · · · · · · ·			
(inches) Color (moist) %	Color (moist)	%		Loc ²	Texture	Remarks		
0 to 8 10YR 1/	2 100		· <u> </u>						
8 to 12 10VP 5/	2 100						·		
12 to 16 10/P 7/	2 100						·		
12 to 18 TOTR 7/	2 <u>100</u>	and Martin CC Ca	vored or	Cootod	Cond Croi	FINE SAND	Lining M. Motrix		
Type: C=Concentration, D=Depi	elion, Rivi=Real	iced Martix, CS=CO	vered or	Coaled	Sano Grai	Ins. 4Location: PL=Pore	Lining, M=Matrix.		
Hydric Soil Indicators:						Indicators for Problem	natic Hydric Soils: ³		
Histosol (A1)		Sandy Gleyed Ma	trix (S4)			Coast Prairie Redoy (/	A16)		
Histic Epipedon (A2)		Sandy Redox (S5)				es (F12)		
Black Histic (A3)		Stripped Matrix (S	6)						
Hydrogen Sulfide (A4)		Loamy Mucky Mir	eral (F1)						
Stratified Layers (A5)		Loamy Gleyed Ma	atrix (F2)			Very Shallow Dark Su	rface (TF12)		
2 cm Muck (A10)		Depleted Matrix (F	=3)			Other (Explain in Rem	arks)		
Depleted Below Dark Surface (A	11)	Redox Dark Surfa	-, ce (E6)						
Thick Dark Surface (A12)	,		rface (E7)						
Sandy Mucky Mineral (S1)						³ Indicators of hydrophyt	tic vegetation and		
			1S (F8)			wetland hydrology must	be present, unless		
5 cm Mucky Peat or Peat (S3)									
☐ Restrictive Layer (if obs	erved):								
Туре:						Hudria Sail Bracant?	Vac No V		
Depth (inches):						Hydric Soli Fresent?			
Remarks: The observed soil profile failed to dis	play indicators of	hydric soil.							
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators	play indicators of	hydric soil.							
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of o	play indicators of : one is required;	hydric soil.)			Secondary Indicato	rs (minimum of two required)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of Surface Water (A1)	play indicators of	hydric soil.) I Leaves (I	B9)		Secondary Indicato	rs (minimum of two required) I Cracks (B6)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of Surface Water (A1) High Water Table (A2)	play indicators of	hydric soil.) I Leaves (I I (B13)	B9)		Secondary Indicato	rs (minimum of two required) I Cracks (B6) atterns (B10)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of Surface Water (A1) High Water Table (A2) Saturation (A3) Wetland to the state of t	play indicators of	hydric soil. check all that apply Water-Stained Aquatic Fauna True Aquatic F) I Leaves (I I (B13) Plants (B14	B9) 4)		Secondary Indicato	rs (minimum of two required) I Cracks (B6) atterns (B10) I Water Table (C2)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of or Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Optimized Factors (D2)	play indicators of	hydric soil. check all that apply Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf) I Leaves (I I (B13) Plants (B14 ide Odor (B9) 4) C1)		Secondary Indicato	rs (minimum of two required) I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8)		
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Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Alnal Mat or Crust (B4)	play indicators of	hydric soil. check all that apply Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhizu Presence of R Recent Iron R) I Leaves (I I (B13) Plants (B14 ide Odor (pospheres a educed Irc eduction in	B9) 4) C1) along Livir on (C4)	ng Roots (C	Secondary Indicato	rs (minimum of two required) I Cracks (B6) atterns (B10) 1 Water Table (C2) Irrows (C8) /isible on Aerial Imag.(C9) Stressed Plants (D1)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of 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)	play indicators of	hydric soil. check all that apply Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Su) I Leaves (I I (B13) Plants (B14 ide Odor (popheres a educed Irc eduction ir frace (C7)	B9) 4) C1) along Livir on (C4) b Plowed \$	ng Roots (C Soils (C6)	Secondary Indicato	rs (minimum of two required) I Cracks (B6) atterns (B10) I Water Table (C2) Irrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) c Position (D2)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of 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 Image	play indicators of	hydric soil. check all that apply Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Ru Thin Muck Su Gauge or Wel) I Leaves (I I (B13) Plants (B14 ide Odor (ospheres a educed Irc eduction ir rface (C7) I Data (D9	B9) 4) C1) along Livir on (C4) a Plowed \$	ng Roots (C Soils (C6)	Secondary Indicato	rs (minimum of two required) I Cracks (B6) atterns (B10) n Water Table (C2) rrows (C8) /isible on Aerial Imag.(C9) Stressed Plants (D1) c Position (D2) al Test (D5)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of 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 Imag Sparsely Vegetated Concave Sur	play indicators of : one is required; ery (B7) f. (B8)	hydric soil. check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Su Gauge or Wel Other (Explain) I Leaves (I I (B13) Plants (B14 ide Odor (cospheres a educed Irc eduction ir rface (C7) I Data (D9 a in Remar	B9) 4) C1) along Livir on (C4) h Plowed S) ks)	ng Roots (C Soils (C6)	Secondary Indicato	rs (minimum of two required) I Cracks (B6) atterns (B10) I Water Table (C2) rrows (C8) /isible on Aerial Imag.(C9) Stressed Plants (D1) c Position (D2) al Test (D5)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of 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 Imag Sparsely Vegetated Concave Sur	ery (B7) f. (B8)	hydric soil. check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna Children Control Nidized Rhizu Presence of R Recent Iron Ro Thin Muck Su Gauge or Wel Other (Explain) I Leaves (I I (B13) Plants (B14) ide Odor (ospheres a educed Irr eduction ir rface (C7) I Data (D9 n in Remar	B9) 4) C1) along Livir on (C4) h Plowed S) ks)	ng Roots (C Soils (C6)	Secondary Indicato	rs (minimum of two required) I Cracks (B6) atterns (B10) I Water Table (C2) Irrows (C8) /isible on Aerial Imag.(C9) Stressed Plants (D1) c Position (D2) al Test (D5)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of 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 Imag Sparsely Vegetated Concave Sur Field Observations:	ery (B7) f. (B8)	hydric soil.) I Leaves (I I (B13) Plants (B14 ide Odor (pospheres a educed Irc eduction ir frace (C7) I Data (D9 i in Remar	B9) 4) C1) along Livir on (C4) a Plowed S) ks)	ng Roots (C Soils (C6)	Secondary Indicato	rs (minimum of two required) I Cracks (B6) atterns (B10) I Water Table (C2) Irrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) c Position (D2) al Test (D5)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of 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 Imag Sparsely Vegetated Concave Surface Water Present? Water Table Recent?	ery (B7) f. (B8) Yes N	hydric soil.) I Leaves (I I (B13) Plants (B14 ide Odor (ospheres a educed Irc eduction ir rface (C7) I Data (D9 I Data (D9 I n Remar	B9) 4) C1) along Livir on (C4) a Plowed S) ks)	ng Roots (C Soils (C6)	Secondary Indicato	rs (minimum of two required) I Cracks (B6) atterns (B10) n Water Table (C2) rrows (C8) /isible on Aerial Imag.(C9) Stressed Plants (D1) c Position (D2) al Test (D5)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of 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 Imag Sparsely Vegetated Concave Surface Water Present? Water Table Present? Water Table Present?	ery (B7) f. (B8) Yes N Yes N Yes N	hydric soil.) I Leaves (I I (B13) Plants (B14 ide Odor (ospheres a educed Irc eduction ir rface (C7) I Data (D9 I in Remar (inches): (inches):	B9) 4) C1) along Livir on (C4) h Plowed S) ks)	ng Roots (C Soils (C6)	Secondary Indicato	rs (minimum of two required) Il Cracks (B6) atterns (B10) Il Water Table (C2) Irrows (C8) /isible on Aerial Imag.(C9) Stressed Plants (D1) c Position (D2) al Test (D5)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of 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 Imag Sparsely Vegetated Concave Surface Water Present? Sutface Water Present? Water Table Present? Saturation Present?	play indicators of : one is required; f. (B8) Yes N Yes N Yes N	hydric soil.) I Leaves (I I (B13) Plants (B14 ide Odor (ospheres a educed Irc eduction ir rface (C7) I Data (D9 n in Remar (inches): (inches):	B9) 4) C1) along Livir on (C4) 1 Plowed \$) ks)	ng Roots (C Soils (C6)	Secondary Indicato	rs (minimum of two required) Il Cracks (B6) atterns (B10) Il Water Table (C2) Irrows (C8) /isible on Aerial Imag.(C9) Stressed Plants (D1) Ic Position (D2) al Test (D5)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of 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 Imag Sparsely Vegetated Concave Surface Water Present? Sutface Water Present? Water Table Present? Saturation Present? Describe Recorded Data (stream gauge)	play indicators of 	hydric soil. check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re Thin Muck Su Gauge or Wel Other (Explain to <u>X</u> Depth (o <u>X</u> Depth (II, aerial photos, previo) I Leaves (I I (B13) Plants (B14) ide Odor (ospheres a educed Irc eduction ir rface (C7) I Data (D9 h in Remar (inches): (inches): (inches): us inspect	B9) 4) C1) along Livir on (C4) a Plowed S) ks) tions), if a	ng Roots (C Soils (C6)	Secondary Indicato	rs (minimum of two required) Il Cracks (B6) atterns (B10) In Water Table (C2) Irrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) Ic Position (D2) In Test (D5)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of 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 Imag Sparsely Vegetated Concave Surface Water Present? Water Table Present? Water Table Present? Water Table Present? Saturation Present? Describe Recorded Data (stream gauge)	ery (B7) f. (B8) Yes N Yes N Yes N Yes N ge, monitoring wel	hydric soil.) I Leaves (I I (B13) Plants (B14) ide Odor (pospheres a educed Irc eduction ir frace (C7) I Data (D9 in Remar (inches): (inches): (inches): us inspect	B9) 4) C1) along Livir on (C4) h Plowed S) ks) tions), if a	ng Roots (C Soils (C6)	Secondary Indicato	rs (minimum of two required) Il Cracks (B6) atterns (B10) Il Water Table (C2) Irrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) Ic Position (D2) al Test (D5)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of a surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imag Sparsely Vegetated Concave Surface Water Present? Water Table Present? Saturation Present? Describe Recorded Data (stream gauge Remarks:	ery (B7) f. (B8) Yes N Yes N Yes N ge, monitoring wel	hydric soil.) I Leaves (I I (B13) Plants (B14 ide Odor (cospheres a educed Irc eduction ir rface (C7) I Data (D9 i in Remar (inches): (inches): (inches): us inspect	B9) 4) C1) along Livir on (C4) 1 Plowed S) ks) 	ng Roots (C Soils (C6)	Secondary Indicato	rs (minimum of two required) I Cracks (B6) atterns (B10) I Water Table (C2) Irrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) Ic Position (D2) al Test (D5)		
Remarks: The observed soil profile failed to dis HYDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of of 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 Imag Sparsely Vegetated Concave Surface Water Present? Water Table Present? Water Table Present? Describe Recorded Data (stream gauge) Remarks: The area failed to meet wetland hydr	play indicators of implement of the second	hydric soil.) I Leaves (I I (B13) Plants (B14 ide Odor (ospheres a educed Irc eduction ir rface (C7) I Data (D9 in Remar (inches): (inches): (inches): us inspect	B9) 4) C1) along Livir on (C4) a Plowed \$) ks) tions), if a	ng Roots (C Soils (C6)	Secondary Indicato	rs (minimum of two required) I Cracks (B6) atterns (B10) I Water Table (C2) Irrows (C8) Visible on Aerial Imag.(C9) Stressed Plants (D1) Ic Position (D2) al Test (D5)		

Project/Site:	Gretna Bottoms			City/Coun	ty:	Sarpy Cour	nty	Sam	oling Date:	4/28/2	015	
Applicant/Owner	: Lyman-Riche	ey Corporation				State	: NE	Sam	pling Point:	S-15		
Investigators:	Ben Fisher		Austin Zigler			Section, Tov	vnship, Rang	e S9	T 13N	R	10E	
Landform (hillslo	pe, terrace, etc.):	Depres	ssion			Local Rel	ief (concave,	convex	(, none): C	oncave		
Slope(%): 2	Lat	41.11763449	994968	Long:	-96.30605282	9315	Datum:	NAD	1983			
Soil Map Unit Na	ame: Gibbon lo	amy fine sand,	overwash, occ	asionally floc	oded		NWI Classifi	cation:	None			
Are climatic / hyd	drologic conditions	on the site typi	cal for this time	of year?	Yes X	No	(If No, ex	plain in	Remarks)			
Are Vegetation	, Soil	, Hydrology	, significant	ly disturbed?		Are "Normal	 Circumstance	es" pres	sent? Yes	з X	No	
Are Vegetation	, Soil	, Hydrology	, naturally p	roblematic?		(If pooded	ovolain any c		in Pomark	-)		
		Attesh s.		:).) . f = = t = t		_
SUIVINAR I	OF FINDINGS		No No	owing sar	npling pol	nt locatio	ns, transe	ects, I	mportant	Teatu	res, et	С.
Hydric Soil Pre	sent?			Is the S	ampled Area							
Wetland Hydro	loav Present?			within a	Wetland?		Yes	X	No			
Deveede		res X										
The area chara	cterized by this dat	ta form is a wet	land fringe to W	/US-1. The a	rea displayed	l indicators o	f hvdrophytic	vegeta	tion, hydric s	soils, ar	nd wetlan	d
hydrology.			iana inigo to ri					regeta	,,	rene, an		u
VEGETATIC	N – Use scient	tific names c	of plants.	Absolute	Dominant	Indicator						
Trace Otracture				<u>% Cover</u>	Species	<u>Status</u>	Dominanc	e Test	Worksheet	:		
Shrub Stratum	<u>.</u>						Number of That Are C	f Domir DBL, FA	ant Species): _	3	(A)
Horb Stratum	<u></u>	6 F I	\				Total Num	bor of F	Ominant			
<u>Pumov o</u>	L (PIOT SIZ	:e: <u>6Ft</u>)	20	V	FAC	Species A	cross a	Il Strata:		3	(B)
Lemna m	ninor				- <u> </u>	OBI	_					
Phalaris	arundinacea				- <u> </u>	FACW	Percent of	Domina	ant Species	·	100.0%	(A/B)
Schoeno	plectus tabernaemon	tani		10	N	OBL		, I ,				
				80	=Total Cover		Prevalenc	e Index	« Workshee	t:		
Vine Stratum	L						Total 9	% Cove	r of:	Mult	tiply by:	
							OBL speci	es	30	_ x 1 =	30	
							FACW spe	ecies	20	_ x 2 =	40	
							FAC speci	es	30	_ x 3 =	90	
							FACU spe	ecies	0	x 4 =	0	
							UPL specie	es	0	x 5 =	0	
							Column To	otals:	80	(A)	160	(B)
							Prev	alence	Index = B/A	=	2.00	
							I buda a a bud		tation India			
							Hydrophyt	ic vege		ators:		
								l est to	r Hydropnyti	c vegei	lation	
								ance I	est > 50%			
							X Preval	ence Ir	idex ≤ 3.0	-		
							Morph data ir Proble	ologica n Rema matic F	l Adaptation rks or on a s lydrophytic '	s (Prov separate Vegetat	ide supp sheet) ion (Exr	orting
							Indicators	of hydi	ric soil and v	vetland	hydrolog	y must
							Hydro	phytic		<u>or prop</u>		
							Vegetation	n Prese	ent? Yes	X	No	
Remarks: (Inclu The area displa	ide photo numbers lyed dominant hydi	here or on a se ophytic vegeta	eparate sheet.) tion.									



Profile Description: (Describe to the depth needed to document the indicator or confin								confirm t	he absence of Indicators.)				
Depth		Matrix		<u> </u>	Redo	x Feat	ures						
(inches)	Colo	r (moist)	%	Color (r	moist)	%	Type 1	Loc ²	Texture	Remarks			
0 to 4	10YR	3/1	90	7.5YR	4/6 10)	С	М	SILT LOAM				
4 to 12	10YR	2/1	95	7.5YR	4/6 5		С	М	SILT LOAM				
¹ Type: C=Con	centration, [D=Depletion,	RM=Re	duced Martix	, CS=Covere	ed or C	Coated S	Sand Grai	ns. 4Location: PL=Pore Lining,	M=Matrix.			
Hydric Soil I Histosol (A Histic Epipe Black Histic Hydrogen S Stratified La	ndicators: 1) edon (A2) c (A3) Sulfide (A4) ayers (A5) (A10)			Sandy G Sandy R Sandy R Loamy N Loamy C	Gleyed Matrix (Redox (S5) I Matrix (S6) Mucky Mineral Gleyed Matrix (C2)	(S4) (F1) (F2)			Indicators for Problematic Hydric Soils: 3 Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF12) Other (Explain in Permarke)				
2 cm Muck Depleted B Thick Dark Sandy Muc 5 cm Muck	(A10) elow Dark Su Surface (A12 ky Mineral (S y Peat or Pea	rface (A11)) 1) t (S3)		Depleted Redox D Depleted Redox C Redox C	d Matrix (F3) Dark Surface (I d Dark Surface Depressions (F	F6) e (F7) ⁻ 8)			³ Indicators of hydrophytic veget: wetland hydrology must be prese disturbed or problemati	ation and ent, unless c.			
Restricti Type: Depth (inch Remarks: The observed s	ive Layer (if observed	t):						Hydric Soil Present? Y	es X No			
HYDROLOG Wetland Hyd Primary Indic Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Inundation Sparsely Vo Field Observ	Ty Irology Ind ators (minim ater (A1) Table (A2) (A3) (A) (A) (A) (A) (A) (A) (A) (A	icators: hum of one is rial Imagery (B: cave Surf. (B8)	requirec	d; check all th Wate Aqua True Hydr Oxid Pres Rece Thin Gau Othe	nat apply) er-Stained Lea atic Fauna (B1 Aquatic Plant ogen Sulfide (ized Rhizosph ence of Reduc ent Iron Reduc Muck Surface ge or Well Dat er (Explain in F	aves (B 3) ts (B14) Odor (C neres al ced Iror ttion in e (C7) ta (D9) Remark	9) 21) long Livin n (C4) Plowed S	g Roots (C Soils (C6)	Secondary Indicators (mini Surface Soil Cracks Drainage Patterns (Dry-Season Water Crayfish Burrows (C Saturation Visible on Stunted or Stressed Geomorphic Positio	mum of two required) (B6) B10) Fable (C2) 8) n Aerial Imag.(C9) Plants (D1) n (D2) D5)			
Surface Water Water Table Saturation Pr Describe Record Remarks:	er Present? Present? resent? ded Data (stre	Yes Yes Yes eam gauge, mo	X X nitoring w	No No _X No vell, aerial phot	Depth (inch Depth (inch Depth (inch os, previous ir	nes): nes): nes): nspectio	ons), if av	0.5-1 0 vailable:	Wetland Hydrology Present?	Yes <u>X</u> No			
The area displa	ayed indicator	s of wetland hy	drology.										

Project/Site:	Gretna Bottoms			City/Coun	ty:	Sarpy Cour	nty	Sampling D	ate:	4/28/20)15	
Applicant/Owner	r: Lyman-Riche	ey Corporation				State	: NE	Sampling F	oint:	S-16		
Investigators:	Ben Fisher		Austin Zigle	er		Section, Tov	wnship, Range	S 9 -	T 13N	R	10E	
Landform (hillslo	ope, terrace, etc.):	Hillslop	e e			Local Rel	lief (concave, c	onvex, none	e): No	one		
Slope(%): 2	lat:	41,11759500	25879	Long:	96.30597840	9281	Datum:	NAD 1983	,			
Soil Map Linit N		omy fine cond			dod	0201		tion: Non	•			
		anthe site turi	overwash, ou			No	(If No. aval					
Are climatic / ny									arks)	X		
Are Vegetation	, Soil,	, Hydrology	, significar	ntly disturbed?	ŀ	Are "Normal	Circumstances	" present?	Yes	X	NO	
Are Vegetation	, Soil,	, Hydrology	, naturally	problematic?		(If needed,	explain any an	swers in Re	marks	.)		
SUMMARY	OF FINDINGS	- Attach a s	ite map sl	nowing sar	npling poi	nt locatio	ons, transec	ts, impoi	rtant	featu	res, et	c.
Hydrophytic Ve	egetation Present?	Yes	No X	-				-				
Hydric Soil Pre	esent?	Yes	No X	Is the S	ampled Area							
Wetland Hydro	ology Present?	Yes	No X	within a	wellanu?		Yes	No	X	_		
Remarks:												
The area chara vegetation, hyd	acterized by this dat Iric soil and wetland	a form is an upl hydrology.	land area adja	acent to the we	etland describ	ed by S-15.	The area failed	to display i	ndicate	ors of hy	ydrophyt	ic
VEGETATIO	DN Use scient	ific names o	f plants	Absolute	Dominant	Indicator						
VEGETATIO			r planto.	<u>% Cover</u>	Species	<u>Status</u>	Dominance	Test Works	sheet:			
Tree Stratum	<u>n</u>						Number of E That Are OE	Oominant Sp SL, FACW, c	becies or FAC	: _	2	(A)
Uarh Stratur	<u></u>						Total Numbe	r of Domine				
	(Plot siz	e: <u>6 Ft</u>)			510	Species Acro	oss all Strat	a:		7	(B)
Rumex c	crispus				- <u>Y</u>	FAC						_ ` `
Digitaria					- <u>ř</u>	FACU	Percent of D	ominant Sp	ecies		28.6%	(A/B)
Galium a	aparine				- <u> </u>	FACU	I nat Are OB	L, FACW, O	r FAC			_ ` `
Helianth	us annuus				- <u> </u>	FACU	Prevalence	Index Work	ksheet	:		
Solidago	gigantea			10	- <u> </u>	FACW	Total %	Cover of:		Multi	ply by:	
Trifolium	repens			10	Y	FACU	OBL species		0	x 1 =	0	
Descura	inia incana			5	N	UPL	EACW speci		15	x 2 =	30	
Urtica di	oica			5	N	FACW			30	x 3 =	90	
				100	=Total Cover			·	50	× 4 –	200	
Vine Stratum	<u>1 </u>						FACU speci	es	50	_ ~ - _	200	
							UPL species		5	× J =	23	
							Column Tota	ls:	100	(A)	345	(B)
							Preval	ence Index	= <i>B/A</i> :	=	3.45	
							Hydrophytic	Vegetation	Indic	ators.		
							Ropid T	of for Lude	onhutiu	Vogot	otion	
										, veyeu	ation	
								ice lest > 5	30%			
							Prevaler	nce Index ≤	3.0			
							Morphol data in F Problem	ogical Adap Remarks or atic Hydrop	tations on a s hvtic \	; (Provi eparate /egetati	ide supp sheet) on (Ext	orting
							Indicators o be present,	f hydric soil unless distu	and w	etland h	nydrolog ematic.	y must
							Hydroph Vegetation I	iytic Present?	Yes		No)	ĸ
Remarks: (Inclu	ude photo numbers	here or on a se	parate sheet.)			I					
I ne area failed	to display indicator	rs of nydrophytic	c vegetation									



Profile Descrip	otion: (Desc	ribe to the	depth nee	ded to docu	ment the indic	cator or	confirm t	the absence of Indicators.)			
Depth		Matrix			Redox Fea	itures		_	_		
(inches)	Color	(moist)	%	Color (mo	ist) %	Type 1	Loc ²	Texture	Rema	arks	
0 to 18	10YR	2/1	100					SILT LOAM	Gravel		
18 to 24	10YR	3/1	100					SILT LOAM	Gravel		
¹ Type: C=Conce	entration, D=	Depletion,	RM=Redu	ced Martix, C	S=Covered or	Coated S	Sand Gra	ins. ² Location: PL=Pore Lining,	M=Matrix.		
Hydric Soil In	dicators:							Indicators for Problematic H	vdric Soils	<u>:</u> 3	
Histosol (A1)				Sandy Gley	ed Matrix (S4)			Coast Prairie Redox (A16)			
Histic Epiped	don (A2)			Sandy Red	ox (S5)			Iron-Manganese Masses (F12)	1		
Black Histic ((A3)			Stripped Ma	atrix (S6)			Dark Surface (S7)			
Hydrogen Su	ulfide (A4)			Loamy Muc	ky Mineral (F1)			Very Shallow Dark Surface (TE	-12)		
Stratified Lay	/ers (A5)			Loamy Gley	yed Matrix (F2)				12)		
2 cm Muck (A	A10)			Depleted M	atrix (F3)						
Depleted Bel	low Dark Surfa	ace (A11)		Redox Dark	k Surface (F6)						
Thick Dark S	Surface (A12)			Depleted D	ark Surface (F7)			2			
Sandy Mucky	y Mineral (S1)			Redox Dep	ressions (F8)			³ Indicators of hydrophytic vegeta	ation and		
5 cm Mucky	Peat or Peat (S3)						disturbed or problemati	D.		
Restrictiv	ve Layer (if	observe	d):								
Туре:											v
Depth (inche	s):							Hydric Soil Present? Y	es	NO	X
Remarks:											
The observed so	oil profile failed	I to display in	idicators of h	ydric soil.							
HYDROLOGY	ζ										
Wetland Hydr	ology Indic	ators:									
Primary Indicat	tors (minimu	m of one is	required; o	check all that	apply)			Secondary Indicators (mini	mum of two	requir	red)
Surface Wate	er (A1)			Water-S	Stained Leaves (B9)		Surface Soil Cracks	(B6)		
High Water T	Table (A2)			Aquatic	Fauna (B13)			Drainage Patterns (310)		
Saturation (A	(3)			True Aq	uatic Plants (B1	4)		Dry-Season Water	able (C2)		
Water Marks	(B1)			Hydroge	en Sulfide Odor (C1)		Crayfish Burrows (C	8)		
Sediment De	eposits (B2)			Oxidize	d Rhizospheres a	along Livir	ng Roots (C	C3) Saturation Visible or	n Aerial Imag	.(C9)	
Drift Deposits	s (B3)			Presence	ce of Reduced Ire	on (C4)		Stunted or Stressed	Plants (D1)		
Algal Mat or	Crust (B4)			Recent	Iron Reduction ir	n Plowed S	Soils (C6)	Geomorphic Positio	า (D2)		
Iron Deposits	s (B5)			Thin Mu	uck Surface (C7)			FAC-Neutral Test (E	15)		
Inundation Vi	isible on Aeria	I Imagery (B	7)	Gauge	or Well Data (D9) 					
Sparsely Veg	getated Conca	ive Surf. (B8)		Other (I	=xplain in Remar	KS)					
Field Observat	tions:										
Surface Water	Present?	Yes	No	D <u>X</u> [Depth (inches):						
Water Table Pr	resent?	Yes	No	D <u>X</u> [Depth (inches):			Wotland Hydrology Present?	Vac	No	v
Saturation Pres	sent?	Yes	No	<u>x</u> L	Depth (Inches):			Wettand Hydrology Fresent:	163		
Describe Recorde	ed Data (strea	m gauge, mo	nitoring well	, aerial photos,	previous inspec	tions), if a	vailable:				
Remarks:											
The area failed to	o meet wetlan	d hydrology	criteria.								



Project/Site:	Gretna Bottoms		City/Coun	ty:	Sarpy Cour	nty	Sampling Date:	4/28/201	15	
Applicant/Owne	r: Lyman-Riche	ey Corporation			State	E NE	Sampling Point:	S-17		
Investigators:	Ben Fisher	Austin Zigle	er	:	Section, Tov	wnship, Range	S 9 T 13N	R 10	0E	
Landform (hillslo	ope, terrace, etc.):	Hillslope			Local Rel	lief (concave, co	onvex, none): C	onvex		
Slope(%): 1	Lat:	41.1155577843298	Long:	-96.30585954	54427	Datum:	NAD 1983			
Soil Map Unit N	ame: Gibbon lo	amy fine sand, overwash, oc	casionally floo	oded		NWI Classifica	tion: None			
Are climatic / hy	drologic conditions	on the site typical for this time	e of year?	Yes X	No	(If No, expl	ain in Remarks)			
Are Vegetation	, Soil,	, Hydrology, significan	tly disturbed?	· A	Are "Normal	Circumstances	" present? Yes	s X	No	
Are Vegetation	, Soil,	, Hydrology, naturally	problematic?		(If needed	explain any any	swers in Remark		_	
		- Attach a site man sh	owing sa	nnling noi	nt locatio	one transoc	te important	foatur	os ot	^
Hydrophytic V	egetation Present?	Yes X No	lowing sai			115, transec	as, important	leature	c3, cl	0.
Hydric Soil Pre	esent?	Yes No X	Is the S	ampled Area						
Wetland Hydro	plogy Present?		within a	Wetland?		Yes	No X			
Pomorko:										
The area chara	acterized by this dat	a form is an upland area on ti	he edge of an	agricultural fie	eld. The area	a failed to displa	av indicators of h	vdric soil	and	
wetland hydrole	ogy; however, the a	rea met hydrophytic vegetatio	on criteria.	-9			-,	,		
VEGETATIO	DN _ Use scient	tific names of plants.	Absolute	Dominant	Indicator					
Tree Christian		•	<u>% Cover</u>	Species	Status	Dominance	Test Worksheet	:		
Tree Stratum	<u>1</u>					Number of E That Are OB	Dominant Species BL, FACW, or FA	; C:	1	(A)
Shrub Stratu	<u>im</u>									
Herb Stratun	n (Plot siz	e: <u>6 Ft</u>)				Total Number	er of Dominant		1	(B)
Equisetu	um hyemale			Y	FACW	-			•	_(D)
Rumex o				N	FAC	Percent of D	ominant Species	. 1	00.0%	(A/B)
Digitaria	vuigata		5	N	FACW	That Are OB	L, FACW, or FAC):		_ (• • =)
	Sunguinans		100	-Total Cover		Prevalence	Index Workshee	:t:		
Vine Stratum	ı					Total %	Cover of:	Multip	ly by:	
<u>une endan</u>	<u>. </u>					OBL species	0	x 1 =	0	
						FACW speci	es <u>85</u>	x 2 =	170	
						FAC species	, 10	x 3 =	30	
						FACU speci	es 5	x 4 =	20	
						UPL species	0	x 5 =	0	
						Column Tota	us 100	(A)	220	(B)
						Preval	ence Index – R/A	_`´	2 20	
						Line and set of a				
						Hydropnytic	vegetation indi	ators:		
							est for Hydrophyt	.c vegetat	lion	
							1 ce 1 est > 50%			
						X Prevaler	the index ≤ 3.0			
						Morphol data in F	ogical Adaptation Remarks or on a s atic Hydrophytic	s (Provid separate s Vegetatio	le supp sheet) n (Exr	orting
						Indicators o	f hydric soil and v unless disturbed	vetland hy	/drology matic.	y must
						Hydroph Vegetation F	nytic Present? Yes	1 X	No	
Remarks: (Inclu	ude photo numbers	here or on a separate sheet.))			1				_
The area displa	ayed dominant hydr	ophytic vegetation.								



SOIL

Depth	Color (n	noist)	0/	Color (moist)	0/.		Loc 2	Texture	Pemarka
				Color (moist)	-70	Type			Remarks
to 8 10		3/2		7.5VD 4/6			<u> </u>		_
$\frac{10}{2} \frac{10}{10}$		3/2	90 -	7.51R 4/0	2				
$\frac{10}{20}$			90 PM-Rodu	7.51K 4/0			IVI Cond Grai	2 ocation: PL -Poro Lining	M_Motrix
ype. C=Concentra		Depletion,	INM=INEGU						
ydric Soil Indica	tors:		-	_				Indicators for Problematic H	<u>lydric Soils:</u> ³
Histosol (A1)			L	Sandy Gleyed Ma	trix (S4)			Coast Prairie Redox (A16)	
☐ Histic Epipedon (A	42)			Sandy Redox (S5)			Iron-Manganese Masses (F12	2)
Black Histic (A3)				Stripped Matrix (S	6)			Dark Surface (S7)	
Hydrogen Sulfide	(A4)			Loamy Mucky Mir	neral (F1)			Very Shallow Dark Surface (T	F12)
Stratified Layers (A5)			Loamy Gleyed Ma	atrix (F2)				1 12)
2 cm Muck (A10)				Depleted Matrix (F	=3)			Other (Explain in Remarks)	
Depleted Below D	ark Surfac	ce (A11)		Redox Dark Surfa	ice (F6)				
Thick Dark Surfac	ce (A12)			Depleted Dark Su	rface (F7)				
Sandy Mucky Min	eral (S1)		Γ	Redox Depression	ns (F8)			³ Indicators of hydrophytic vege	tation and
5 cm Mucky Peat	or Peat (S	3)	L		()			disturbed or problemat	ic.
Restrictive L	aver (if ,	observer	<i>۱</i> ۰						
	ayer (ii v	UDSEI VEL	<i>.</i>						
Type.									
Depth (inches): emarks: he observed soil pro	file failed f	to display in	dicators of h	ıydric soil.				Hydric Soil Present?	Yes No
Depth (inches): emarks: The observed soil pro YDROLOGY /etland Hydrolog	gy Indica	to display in	dicators of h	nydric soil.)			Hydric Soil Present?	imum of two require
Depth (inches): emarks: The observed soil pro YDROLOGY Vetland Hydrolog Primary Indicators	ofile failed f gy Indica (minimun	to display in Itors: n of one is	dicators of h	hydric soil.)	39)		Hydric Soil Present?	imum of two require
Depth (inches): emarks: The observed soil pro YDROLOGY Yetland Hydrolog Primary Indicators Surface Water (A' High Water Table	gy Indica (minimun 1) (A2)	to display in tors: n of one is	dicators of h	ydric soil. check all that apply) d Leaves (E a (B13)	39)		Hydric Soil Present?	imum of two require s (B6) (B10)
Depth (inches): emarks: The observed soil pro YDROLOGY Vetland Hydrolog Primary Indicators Surface Water (A' High Water Table Saturation (A3)	gy Indica (minimun 1) (A2)	to display in tors: n of one is	dicators of h	check all that apply U Water-Stained Aquatic Fauna) I Leaves (E a (B13) Plants (B14	39)		Hydric Soil Present?	imum of two require s (B6) (B10) Table (C2)
Depth (inches): marks: The observed soil pro- XDROLOGY XDROLOGY Automation (A) Saturation (A3) Water Marks (B1)	gy Indica (minimun 1) (A2)	to display in I tors: In of one is	dicators of h	check all that apply Water-Stained Aquatic Fauna) d Leaves (E a (B13) Plants (B14	39) I) C1)		Hydric Soil Present?	imum of two require s (B6) (B10) Table (C2) C8)
Depth (inches): marks: The observed soil pro- WDROLOGY Vetland Hydrolog Primary Indicators Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit	gy Indica (minimun 1) (A2) ss (B2)	to display in I tors: n of one is	dicators of h	check all that apply Check all) d Leaves (E a (B13) Plants (B14 iide Odor ((ospheres a	39) I) C1) along Livin	g Roots (C	Hydric Soil Present?	imum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9)
Depth (inches): emarks: The observed soil products YDROLOGY Vetland Hydrolog Primary Indicators Surface Water (A ² High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3	gy Indica (minimun 1) (A2) (s (B2)	to display in tors: n of one is	dicators of h	check all that apply Check all) d Leaves (E a (B13) Plants (B14 iide Odor ((ospheres a educed Iro	39) t) C1) along Livin on (C4)	g Roots (C	Hydric Soil Present? Secondary Indicators (min Surface Soil Crack: Drainage Patterns Dry-Season Water Crayfish Burrows (f 3) Saturation Visible of	imum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1)
Depth (inches): emarks: The observed soil pro- YDROLOGY Yetland Hydrolog Primary Indicators Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits (B3 Algal Mat or Crust	gy Indica (minimun 1) (A2) (s (B2)) t (B4)	to display in Itors: In of one is	dicators of h	check all that apply Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re) d Leaves (E a (B13) Plants (B14 ride Odor (C ospheres a reduced Iro eduction in	39) I) C1) along Livin on (C4) Plowed S	g Roots (C Soils (C6)	Hydric Soil Present?	imum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2)
Depth (inches): marks: The observed soil pro- YDROLOGY Yetland Hydrolog Primary Indicators Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3 Algal Mat or Cruss Iron Deposits (B5)	gy Indica (minimun 1) (A2) s (B2)) t (B4))	to display in I tors: n of one is	dicators of h	check all that apply Check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Frue Aquatic Fauna) d Leaves (E a (B13) Plants (B14 ide Odor ((ospheres a reduced Iro eduction in rface (C7)	39) () C1) along Livin on (C4) Plowed S	g Roots (C Soils (C6)	Hydric Soil Present? Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (i 3) Saturation Visible o Stunted or Stresse Geomorphic Positic ¥ FAC-Neutral Test (imum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) D5)
Depth (inches): marks: The observed soil pro- XDROLOGY Vetland Hydrolog Primary Indicators Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits (B3) Drift Deposits (B3) Iron Deposits (B5) Inundation Visible	gy Indica (minimun 1) (A2) (s (B2)) t (B4)) e on Aerial	to display in Itors: n of one is	dicators of h	check all that apply check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Cylone Sulf Oxidized Rhizd Recent Iron Ra Thin Muck Su Gauge or Wel) d Leaves (E a (B13) Plants (B14 ide Odor (f ospheres a educed Iro eduction in rface (C7) Il Data (D9)	39) I) C1) along Livin on (C4) I Plowed S	g Roots (C Soils (C6)	Hydric Soil Present? Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (f 3) Saturation Visible of Stunted or Stresse Geomorphic Position ✓ FAC-Neutral Test (f	imum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) D5)
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Depth (inches): marks: The observed soil pro- YDROLOGY Yetland Hydrolog Primary Indicators Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Inundation Visible Sparsely Vegetate ield Observations	gy Indica (minimun 1) (A2) (A2) (B2) (B2) (B4) (B4)) (B4) (Concav S:	to display in Itors: n of one is Imagery (B ² e Surf. (B8)	dicators of h	check all that apply Check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Oxidized Rhize Presence of R Recent Iron Re Thin Muck Su Gauge or Wel Other (Explain) d Leaves (E a (B13) Plants (B14 ide Odor ((ospheres a educed Iro eduction in rface (C7) I Data (D9) n in Remarl	39) 4) C1) along Livin n (C4) Plowed S) ks)	g Roots (C Soils (C6)	Hydric Soil Present?	imum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) D5)
Depth (inches): marks: The observed soil pro- YDROLOGY Yetland Hydrolog Primary Indicators Surface Water (Ar High Water Table Saturation (A3) Water Marks (B1) Sediment Deposits Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Inundation Visible Sparsely Vegetate ield Observations Surface Water Pres	gy Indica (minimun 1) (A2) (A2) (A2) (A2) (A2) (A2) (A2) (A2	to display in tors: n of one is Imagery (B: e Surf. (B8) Yes	dicators of h	check all that apply check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Oxidized Rhizd Presence of R Recent Iron Rd Recent Iron Rd Gauge or Wel Other (Explain) d Leaves (E a (B13) Plants (B14 ide Odor (f ospheres a reduced Iro eduction in rface (C7) Il Data (D9) n in Remart	39) I) C1) Ilong Livin on (C4) Plowed S) ks)	g Roots (C Soils (C6)	Hydric Soil Present? Secondary Indicators (min Surface Soil Crack: Drainage Patterns Dry-Season Water Crayfish Burrows (f 3) Saturation Visible of Stunted or Stresse Geomorphic Position ✓ FAC-Neutral Test (f	imum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) D5)
Depth (inches): marks: The observed soil pro- YDROLOGY Yetland Hydrolog Primary Indicators Surface Water (A- High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3) Algal Mat or Crusi Iron Deposits (B5) Inundation Visible Sparsely Vegetate ield Observations Water Table Preser	gy Indica (minimun 1) (A2) (A2) (A2) (A2) (A2) (A2) (A2) (A2	to display in tors: n of one is Imagery (B ² e Surf. (B8) Yes Yes	// // // // // // // // // // // // //	bydric soil. bydric soil. bydric soil. bydric soil. bydric soil. check all that apply bydrogen Sulf check all that apply ch) d Leaves (E a (B13) Plants (B14 ide Odor ((ospheres a reduced Iro eduction in rface (C7) Il Data (D9) n in Remark (inches): (inches):	39) I) C1) Iong Livin on (C4) Plowed S) ks)	g Roots (C Soils (C6)	Hydric Soil Present?	imum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) D5)
Depth (inches): marks: The observed soil pro- YDROLOGY Yetland Hydrolog Primary Indicators Surface Water (A' High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3) Algal Mat or Crust Iron Deposits (B5) Inundation Visible Sparsely Vegetate idd Observations Surface Water Preser Saturation Present?	gy Indica (minimun 1) (A2) (A2) (A2) (A2) (A2) (A2) (A2) (A2	to display in Itors: n of one is lmagery (Bi e Surf. (B8) Yes Yes Yes	// // // // // // // // // // // // //	check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna Oxidized Rhize Presence of R Recent Iron R Recent Iron R Gauge or Wel Other (Explain Depth (Do X Depth () d Leaves (E a (B13) Plants (B14 ide Odor ((ospheres a educed Iro eduction in rface (C7) Il Data (D9) n in Remark (inches): (inches):	39) () C1) Ilong Livin on (C4) Plowed S) ks)	g Roots (C Soils (C6)	Hydric Soil Present? Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (i 3) Saturation Visible of Stunted or Stresse Geomorphic Positio ¥ FAC-Neutral Test (res No imum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) D5) Yes No
Depth (inches): marks: The observed soil pro- YDROLOGY Vetland Hydrolog Primary Indicators Surface Water (Ar High Water Table Saturation (A3) Water Marks (B1) Sediment Deposit Drift Deposits (B3 Algal Mat or Crust Iron Deposits (B5) Inundation Visible Sparsely Vegetate ield Observations Surface Water Preser Saturation Present? Excribe Recorded Da	gy Indica (minimun 1) (A2) (A2) (A2) (A2) (A2) (A2) (A2) (A2	to display in Itors: n of one is Imagery (B ² e Surf. (B8) Yes Yes Yes Yes Yes	dicators of h required; c 7)	check all that apply Check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Fresence of R Recent Iron R Recent Iron R Gauge or Wel Gauge or Wel Other (Explain Cher (Explain C) d Leaves (E a (B13) Plants (B14 iide Odor ((ospheres a educed Iro eduction in rface (C7) Il Data (D9) n in Remark (inches): (inches): (inches): ous inspect	39) () C1) along Livin on (C4) Plowed S) ks) 	g Roots (C Soils (C6)	Hydric Soil Present? Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (i 3) Saturation Visible of Stunted or Stresse Geomorphic Position ¥ FAC-Neutral Test (i Wetland Hydrology Present?	res No imum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) D5) Yes No
Depth (inches): marks: The observed soil pro- /DROLOGY /etland Hydrolog rimary Indicators] Surface Water (Ar] High Water Table] Saturation (A3)] Water Marks (B1)] Sediment Deposits [] Drift Deposits (B3)] Algal Mat or Crust] Iron Deposits (B5)] Inundation Visible] Sparsely Vegetate eld Observations Surface Water Prese Water Table Presert Saturation Present? Iscribe Recorded Da	gy Indica (minimun 1) (A2) (A2) (B4)) t (B4)) e on Aerial ed Concav s: ient? ht? ht?	to display in Itors: n of one is Imagery (Bi e Surf. (B8) Yes Yes Yes Yes Yes	dicators of h required; c 7)	check all that apply check all that apply Water-Stained Aquatic Fauna True Aquatic Fauna True Aquatic Fauna Code Code Code Code Code Code Code Code) d Leaves (E a (B13) Plants (B14 ide Odor ((ospheres a educed Iro eduction in rface (C7) Il Data (D9) n in Remarl (inches): (inches): (inches): (inches): ous inspect	39) 1) C1) 10 on (C4) 1) Plowed S 1) ks) ions), if av	g Roots (C Soils (C6)	Hydric Soil Present? Secondary Indicators (min Surface Soil Crack Drainage Patterns Dry-Season Water Crayfish Burrows (i 3) Saturation Visible of Stunted or Stresse Geomorphic Position Image Patterns Wetland Hydrology Present?	imum of two require s (B6) (B10) Table (C2) C8) on Aerial Imag.(C9) d Plants (D1) on (D2) D5) Yes No

Project/Site: Gretna Bottoms	City/Count	ty:	Sarpy Coun	ty S	Sampling Date:	1/29/201	5	
Applicant/Owner: Lyman-Richey Corporation			State	NE	Sampling Point:	S-18		
Investigators: Ben Fisher Austin Zigle	r	:	Section, Tow	nship, Range	S 9 T 13N	R 10	E	
Landform (hillslope, terrace, etc.): Hillslope			Local Reli	ief (concave, co	nvex, none): Co	nvex		
Slope(%): 10 Lat: 41.1176247183099	Long: -	96.29177844	13741	Datum:	NAD 1983			
Soil Map Unit Name: Gibbon-Wann complex, occasionally flo	oded			NWI Classificat	ion: None			
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes X	No	(If No, expla	ain in Remarks)			
Are Vegetation, Soil, Hydrology, significant	tly disturbed?	A	re "Normal (Circumstances"	present? Yes	Х	No	
Are Vegetation, Soil, Hydrology, naturally p	oroblematic?		(If needed.	explain anv ans	wers in Remarks.)		
SUMMARY OF FINDINGS - Attach a site map sh	owing sar	nplina poir	nt locatio	ns. transect	s. important f	eature	s. etc	c.
Hydrophytic Vegetation Present? Yes X No	<u>-</u>			,			<u></u>	
Hydric Soil Present? Yes X No	Is the Sa	ampled Area						
Wetland Hydrology Present? Yes X No	within a	wetiand?		Yes X	No	-		
The area characterized by this data form is an emergent wetlan and wetland hydrology.	d fringe of W	US-2. The are	a displayed	indicators of hyd	drophytic vegetatio	on, hydrio	c soils,	,
VEGETATION Use scientific names of plants.	Absolute	Dominant_	Indicator					
	<u>% Cover</u>	<u>Species</u>	<u>Status</u>	Dominance 1	Test Worksheet:			
Tree Stratum				Number of De	ominant Species		1	(A)
Shrub Stratum				mat Are obt	_, 1 AOW, 011 AO.			_ ` `
Herb Stratum (Plot size: <u>6 Ft</u>)				Total Number	of Dominant		0	
Phalaris arundinacea	70	Y	FACW	Species Acro	ss an Strata.		2	(B)
Helianthus annuus	20	Y	FACU	Percent of Do	minant Species	5	0.0%	(A/R)
Bromus inermis		N	FACU	That Are OBL	, FACW, or FAC:		0.070	_ (//, D)
No. Oralise	100	_=Total Cover		Prevalence l	ndex Worksheet:			
vine Stratum				Total % C	Cover of:	Multipl	y by:	
				OBL species	0	x 1 =	0	
				FACW specie	es 70	x 2 =	140	
				FAC species	0	x 3 =	0	
				FACU specie	30	x 4 =	120	
				UPL species	0	x 5 =	0	
					100	(A)	260	(B)
				Column Total	s:	()	200	(0)
				Prevale	ence index = B/A=		2.60	
				Hydrophytic \	Vegetation Indica	tors:		
				Rapid Te	st for Hydrophytic	Vegetati	on	
				Dominan	ce Test > 50%			
				X Prevalen	ce Index ≤ 3.0			
				Morpholo data in R Problema	gical Adaptations emarks or on a se atic Hydrophytic Ve	(Provide parate sl egetation	e suppo heet) n (Exp	orting plain)
				Indicators of be present, u	hydric soil and we unless disturbed o	tland hyer	drology natic.	y must
				Hydroph Vegetation P	ytic resent? Yes	ХN	o	
Remarks: (Include photo numbers here or on a separate sheet.)								-

The area displayed dominant hydrophytic vegetation with upland vegetation on the edge of the area.



Profile Descri	ption: (Des	cribe to the	depth nee	ded to docur	nent the indi	cator or	confirm th	e absence of Indicators.)	
Depth		Matrix			Redox Fea	atures		,	
(inches)	Color	(moist)	%	Color (mois	st) %	Type 1	Loc ²	Texture	Remarks
0 to 12	10YR	3/1	95	7.5YR 4/6	5 5			SILT LOAM	
¹ Type: C=Cond	centration, D	=Depletion,	RM=Reduc	ced Martix, CS	S=Covered or	Coated	Sand Grair	ns. 4_ocation: PL=Pore Li	ning, M=Matrix.
Hydric Soil In	ndicators:		_					Indicators for Problemat	ic Hydric Soils: ³
Histosol (A1)			Sandy Gleye	ed Matrix (S4)			Coast Prairie Redox (A16	3)
Histic Epipe	don (A2)			Sandy Redo	ox (S5)			Iron-Manganese Masses	(F12)
Black Histic	(A3)			Stripped Ma	trix (S6)			Dark Surface (S7)	
Hydrogen S	ulfide (A4)			Loamy Muck	ky Mineral (F1)			Very Shallow Dark Surfa	ce (TF12)
Stratified La	ayers (A5)			Loamy Gley	ed Matrix (F2)			Other (Evaluin in Remark	(1112)
2 cm Muck	(A10)			Depleted Ma	atrix (F3)			Other (Explain in Remark	.S)
Depleted Be	elow Dark Sur	face (A11)		Redox Dark	Surface (F6)				
Thick Dark	Surface (A12)			Depleted Da	ark Surface (F7))		3	
Sandy Muck	ky Mineral (S1)		Redox Depr	essions (F8)			Indicators of hydrophytic wetland hydrology must be	vegetation and present, unless
5 cm Mucky	Peat or Peat	(S3)						disturbed or probl	ematic.
Restriction Type: Dopth (inch)	ve Layer (i	f observe	d):					Hydric Soil Present?	Yes X No
Depth (Inch	es):								
	\$7								
HYDROLOG	Y								
Wetland Hyd Primary Indica	rology Indi ators (minim	cators: um of one is	required; c	heck all that a	apply)			Secondary Indicators	(minimum of two required)
Surface Wa	ter (A1)			Water-S	tained Leaves ((B9)		Surface Soil C	racks (B6)
High Water	Table (A2)			Aquatic I	Fauna (B13)			Drainage Patte	erns (B10)
Saturation (A3)			True Aqu	uatic Plants (B1	4)		Dry-Season W	ater Table (C2)
Water Mark	s (B1)			Hydroge	n Sulfide Odor	(C1)		Crayfish Burro	ws (C8)
Sediment D	eposits (B2)			Oxidized	Rhizospheres	along Livir	ng Roots (C3	3) Saturation Vis	ble on Aerial Imag.(C9)
Drift Deposi	ts (B3)			Presence	e of Reduced Ir	on (C4)		Stunted or Str	essed Plants (D1)
Algal Mat or	r Crust (B4)			Recent I	ron Reduction i	n Plowed S	Soils (C6)	Geomorphic P	osition (D2)
	ts (B5)		-,		ck Surface (C7))		✓ FAC-Neutral T	est (D5)
	Visible on Aer	al Imagery (E	57) N		or Well Data (DS	9) 5(0)			
	egetated Cond	ave Sun. (Bo)		xpiain in Rema	iks)			
Field Observa	ations:								
Surface Wate	r Present?	Yes	No	<u>x</u> D	epth (inches):				
Saturation Pro	resent?	Yes			eptn (inches):		4	Wetland Hydrology Prese	nt? Yes X No
		165	<u></u>	D	eptil (inches).				
Describe Record	led Data (strea	am gauge, mo	onitoring well,	aerial photos,	previous inspec	ctions), if a	vailable:		
Remarks:	and in all the								
The area displa	iyed indicators	s of wetland h	ydrology.						

Project/Site: Gr	retna Bottoms			City	/Count	ty:	Sarpy Coun	ity	Sampling [Date:	4/29/20	15	
Applicant/Owner:	Lyman-Riche	y Corporation					State	NE	Sampling I	Point:	S-19		
Investigators:	Ben Fisher		Austin Zigl	er			Section, Tow	vnship, Range	S 9	T 13N	R 1	I0E	
Landform (hillslope	, terrace, etc.):	Hillslope					Local Reli	ief (concave, c	onvex, non	e): Co	onvex		
Slope(%): 15	Lat:	41.117629029	445	Lo	ong: -	96.29179727	12554	Datum:	NAD 1983				
Soil Map Unit Name	e: Gibbon-W	ann complex, oc	casionally f	looded				NWI Classifica	tion: Non	e			
Are climatic / hydro	logic conditions of	on the site typica	I for this tim	e of yea	ar?	Yes X	No	(If No, expl	lain in Rem	arks)			
Are Vegetation	, Soil,	Hydrology	_, significa	ntly distu	urbed?	Ą	re "Normal (Circumstances	present?	Yes	Х	No	
Are Vegetation	, Soil,	Hydrology	_, naturally	problem	natic?		(If needed,	explain any an	swers in Re	emarks	.)		
SUMMARY OF	F FINDINGS ·	- Attach a sit	e map sl	nowin	q sar	npling poil	nt locatio	ns, transec	ts, impo	rtant	featur	res, et	tc.
Hydrophytic Vege	tation Present?	Yes	No X						- * - •				
Hydric Soil Preser	nt?	Yes	No X	ls	the Sa	ampled Area				v			
Wetland Hydrolog	gy Present?	Yes	No X		iunn a	Wettand		res	NO	X	_		
Remarks:			. <u> </u>										
The area characte hydrophytic vegeta	rized by this data ation, hydric soils	a form is an uplai s, and wetland hy	nd area adja rdrology.	acent to	the we	etland characte	erized in S-1	8. The area fai	iled to displ	ay indio	cators o	f	
VEGETATION	 Use scienti 	ific names of	plants.	<u>Abso</u> <u>% Co</u>	olute over	Dominant Species	Indicator Status	Dominance	Test Work	sheet:			
Tree Stratum								Number of E That Are OE	Dominant S BL, FACW,	pecies or FAC	:	0	(A)
Shrub Stratum	<i>(</i>							Tatal Number					
Herb Stratum	(Plot size	e: <u>6 Ft</u>)			00	V	FACU	Species Acro	oss all Strat	ant ta:		1	(B)
Phalaris aru	ndinacea				90	- <u>Y</u> N	FACU						_ ` `
					100	=Total Cover		Percent of D That Are OB	ominant Sp L, FACW, o	ecies or FAC	:	0.0%	_(A/B)
Vine Stratum								Bassalaasa	I				
								Prevalence		ksneet			
									Cover of:	0			
								OBL species	S	10	_ ^ ' _ x 2 -	20	
								FACW speci	les	0	_ ^ _ x 3 _	0	
								FAC species		90	- × 4 -	360	
								FACU spec	ies	0	_ × 5 =	0	
								UPL species	;				(P)
								Column Tota	als:	100	_(A)	380	<u>(</u> B)
								Preval	lence Index	= <i>B</i> /A=	=	3.80	
								Hydrophytic	Vegetation	1 Indic	ators:		
								Rapid T	est for Hydi	ophytic	: Vegeta	ation	
								Domina	nce Test >	50%			
								Prevaler	nce Index ≤	3.0			
								Morphol data in F Problem	ogical Adar Remarks or atic Hydrop	otations on a so ohytic \	3 (Provi eparate /egetatio	de supp sheet) on (Ex	corting
								Indicators o be present,	f hydric soi unless dist	and w urbed (etland h or proble	iydrolog ematic.	jy must
								Hydroph Vegetation I	nytic Present?	Yes		No	x
Remarks: (Include	photo numbers l ated by upland v	here or on a separeter	arate sheet)									



Profile Description: (Describe to the depth	needed to document th	e indicato	r or confirm	the absence of Indicators.)	
Depth Matrix	Red	ox Feature	S		
(inches) Color (moist) %	6 Color (moist)	% Ту	/pe ¹ Loc ²	Texture	Remarks
0 to 8 10YR 3/1 100)			SILT LOAM	
8 to 18 10YR 4/1 100)			SILT LOAM	
¹ Type: C=Concentration, D=Depletion, RM=F	Reduced Martix, CS=Cove	red or Coa	ated Sand Gra	ains. ² Location: PL=Pore Lining, N	1=Matrix.
Hydric Soil Indicators:				Indicators for Problematic Hyd	lric Soils: ³
Histosol (A1)	Sandy Gleyed Matrix	c (S4)		Coast Prairie Redox (A16)	
Histic Epipedon (A2)	Sandy Redox (S5)			Iron-Manganese Masses (F12)	
Black Histic (A3)	Stripped Matrix (S6)			Dark Surface (S7)	
Hydrogen Sulfide (A4)	Loamy Mucky Miner	al (F1)		Very Shallow Dark Surface (TE1	2)
Stratified Layers (A5)	Loamy Gleyed Matri	k (F2)			-)
└── 2 cm Muck (A10)	Depleted Matrix (F3)				
Depleted Below Dark Surface (A11)	Redox Dark Surface	(F6)			
Thick Dark Surface (A12)	Depleted Dark Surfa	ce (F7)		2	
Sandy Mucky Mineral (S1)	Redox Depressions	(F8)		Indicators of hydrophytic vegetat wetland bydrology must be present	ion and t_unless
5 cm Mucky Peat or Peat (S3)				disturbed or problematic.	i, uness
□ Restrictive Layer (if observed):					
Туре:				Hydric Soil Present? Ye	s No X
Depth (inches):					
The observed soil profile failed to display indicator	s of hydric soil.				
HYDROLOGY					
Wetland Hydrology Indicators:					
Primary Indicators (minimum of one is required	ed; check all that apply)			Secondary Indicators (minim	um of two required)
Surface Water (A1)	Water-Stained Lo	eaves (B9)		Surface Soil Cracks (36)
High Water Table (A2)	Aquatic Fauna (E	813)		Drainage Patterns (B	10)
Saturation (A3)	True Aquatic Pla	nts (B14)		Dry-Season Water Ta	ble (C2)
Water Marks (B1)	Hydrogen Sulfide	Odor (C1)		Crayfish Burrows (C8)
Sediment Deposits (B2)	Oxidized Rhizosp	heres along	g Living Roots	C3) Saturation Visible on .	Aerial Imag.(C9)
Drift Deposits (B3)	Presence of Red	uced Iron (C	(00)	Stunted or Stressed F	Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Red	uction in Plo	wed Soils (C6)		(D2)
Iron Deposits (B5)		ce (C7)		FAC-Neutral Test (D5)
Sparsoly Vegetated Conceive Surf. (B8)	Gauge of Weil D Other (Explain in	Bomarka)			
		Kelliarks)			
Field Observations:					
Surface Water Present? Yes	No X Depth (inc	ches):		-	
Water Table Present? Yes	_ No <u>X</u> Depth (inc	ches):		Wetland Hydrology Present?	Ves No X
Saturation Present? Yes	_ No <u>X</u> Depth (inc	ches):			
Describe Recorded Data (stream gauge, monitoring	g well, aerial photos, previous	inspections), if available:		
Remarks: The area failed to meet wetland hydrology criteria					
The area failed to meet wetland fydrology Ulteria.					

Project/Site:	Gretna Bottoms			City/Cour	nty:	Sarpy Cour	nty	Sampling	Date:	4/30/20	15	
Applicant/Owner:	Lyman-Ric	hey Corporation				State	: NE	Sampling	Point:	S-20		
Investigators:	Ben Fisher		Austin Zigler			Section, Tov	wnship, Range	S 9	T 13N	R	10E	
Landform (hillslope	e, terrace, etc.)	: Depres	sion			Local Rel	lief (concave, c	convex, noi	ne): C	oncave		
Slope(%): 0	L	at: 41.10369679	07409	Long:	-96.30448132	34725	Datum:	NAD 198	3			
Soil Map Unit Nam	ne: Gibbon	loamy fine sand,	overwash, occa	sionally floo	oded		NWI Classifica	ation: No	ne			
Are climatic / hydro	ologic conditio	ns on the site typic	cal for this time	of year?	Yes X	No	(If No, exp	lain in Ren	narks)			
Are Vegetation	, Soil	_, Hydrology	, significantly	y disturbed?	?	Are "Normal	Circumstances	s" present?	' Yes	Х	No	
Are Vegetation	, Soil	_, Hydrology	, naturally pr	oblematic?		(If needed,	explain any ar	nswers in F	≀emarks	i.)		
SUMMARY O	F FINDING	S - Attach a s	ite map sho	wing sa	ioa pailam	nt locatio	ons. transed	cts. imp	ortant	featur	es. et	c.
Hydrophytic Veg	etation Presen	t? Yes X	No									
Hydric Soil Prese	ent?	Yes X	No	Is the S	ampled Area		N	х N-				
Wetland Hydrolo	ogy Present?	Yes X	No	within	a Wedana .		res			_		
Remarks:												
The area charact soils, and wetland	erized by this o d hydrology.	lata form is a wetl	and swale locat	ed north of	Fairview Road	d. The area c	lisplayed indica	ators of hyd	drophyti	c vegeta	ition, hyd	dric
VEGETATION	N _ Use scie	ntific names o	f plants.	Absolute <u>% Cover</u>	Dominant Species	Indicator Status	Dominance	e Test Wor	ksheet			
Tree Stratum							Number of	Dominant S	Species		2	(Δ)
Shrub Stratum							That Are O	BL, FACW	, or FAC			_ (^)
Herb Stratum	(Plot s	size: <u>6 Ft</u>)				Total Numb	er of Domi	nant		_	-
Carex festu	ucacea			70	Y	FACW	Species Aci	ross all Stra	ata:		2	(B)
Poa praten	nsis				Y =Total Cover	FAC	Percent of D That Are OB	Dominant S BL, FACW,	pecies or FAC	:	100.0%	(A/B)
Vine Stratum	-						Descalarias					
							Prevalence	Index Wo	rksheet			
								Cover of:	0	$\frac{1}{x 1 =}$		
								s	70	_ x 2 =	140	
								les	30	- ^	90	
								S	0	x 4 =	0	
								ies	0	x 5 =	0	
							UPL species	s	100	_ (A)		(D)
							Column Tot	als:	100	_(A) _	230	<u>(</u> D)
							Preva	lence Inde	x = B/A		2.30	
							Hydrophytic	· Vegetatio	on Indic	ators:		
							Rapid T	est for Hyd	drophyti	c Vegeta	ation	
							X Domina	nce Test >	50%			
							X Prevale	nce Index	≤ 3.0			
							Morpho data in Problen	logical Ada Remarks o natic Hydro	aptations or on a s ophytic \	3 (Provi eparate /egetatio	de supp sheet) on (Exp	orting plain)
							Indicators of be present	of hydric so , unless dis	oil and waturbed	etland h or proble	ydrology ematic.	y must
							Hydrop Vegetation	hytic Present?	Yes	X	No	
Remarks: (Include The area displaye	e photo numbe ed dominant hy	rs here or on a se drophytic vegetat	parate sheet.) ion.									



Depth (inches) Matrix Redox Features 0 to 16 10YR 4 / 1 55 7.5YR 4/6 5 C M SAND Mixed Matrix 0 to 16 10YR 3 / 1 40 SAND Mixed Matrix 16 to 20 10YR 3 / 1 95 7.5YR 4/6 5 C M LOAMY SAND Mixed Matrix 16 to 20 10YR 3 / 1 95 7.5YR 4/6 5 C M LOAMY SAND Mixed Matrix 17type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 4.ocation: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Sandy Gleyed Matrix (S4) IoAmy Sandy Redox (S5) Inon-Manganese Masses (F12) Black Histic (A3) Stripped Matrix (S6) Ioron-Manganese Masses (F12) Dark Surface (S7) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 2 cm Muck (A10) Depleted Matrix (F3) Depleted Matrix (F3) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. 5 cm Mucky Mineral (S1) Redox D	Remarks Mixed Matrix Mixed Matrix M=Matrix. ydric Soils: 3 12) tion and nt, unless :.
(inches) Color (moist) % Color (moist) % Type 1 Loc 2 Texture Remark 0 to 16 10YR 4/1 55 7.5YR 4/6 5 C M SAND Mixed Matrix 0 to 16 10YR 3/1 40	Remarks Mixed Matrix Mixed Matrix Matrix M=Matrix. ydric Soils: ³ 12) 1tion and nt, unless 2.
0 to 16 10YR 4/1 55 7.5YR 4/6 5 C M SAND Mixed Matrix 16 to 20 10YR 3/1 95 7.5YR 4/6 5 C M LOAMY SAND Mixed Matrix 16 to 20 10YR 3/1 95 7.5YR 4/6 5 C M LOAMY SAND Mixed Matrix 17 to 20 10YR 3/1 95 7.5YR 4/6 5 C M LOAMY SAND Mixed Matrix 17 to 20 10YR 3/1 95 7.5YR 4/6 5 C M LOAMY SAND 17 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 4.ocation: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Sandy Gleyed Matrix (S4) Indicators for Problematic Hydric Soils: 3 3 Black Histic (A3) Stripped Matrix (S6) Ioamy Gleyed Matrix (F2) Dark Surface (S7) Dark Surface (S7) Dark Surface (S7) Dark Surface (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Depressions (F8) 3	Mixed Matrix Mixed Matrix M=Matrix. wdric Soils: ³ 12) 12)
0 to 16 to 20 10YR 3 / 1 40 Mixed Matrix 16 to 20 10YR 3 / 1 95 7.5YR 4/6 5 C M LOAMY SAND Mixed Matrix 1'Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. 4.ocation: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Inon-Manganese Masses (F12) Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) Dark Surface (S7) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Mineral (S1) Redox Depressions (F8) 3 Indicators of pydophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	Mixed Matrix M=Matrix. ydric Soils: ³ 12) 12) tion and nt, unless 2.
16 to 20 10YR 3 / 1 95 7.5YR 4/6 5 C M LOAMY SAND 'Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Sandy Gleyed Matrix (S4) *Location: PL=Pore Lining, M=Matrix. Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Iron-Manganese Masses (F12) Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F3) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) 3 Thick Dark Surface (A12) Depleted Dark Surface (F7) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. S or Mucky Peat or Peat (S3) Redox Depressions (F8) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	M=Matrix. <u>vdric Soils:</u> ³ 12) 12) tion and nt, unless 2.
¹ Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators: Indicators for Problematic Hydric Soils: ³ Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Iron-Manganese Masses (F12) Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) 3 Thick Dark Surface (A12) Depleted Dark Surface (F7) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	M=Matrix. vdric Soils: ³ (12) (12) Ition and nt, unless
Hydric Soil Indicators: Indicators for Problematic Hydric Soils: 3 Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Black Histic (A3) Stripped Matrix (S6) Iron-Manganese Masses (F12) Dark Surface (S7) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Stratified Layers (A5) Depleted Matrix (F3) Other (Explain in Remarks) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Mineral (S1) Redox Depressions (F8) 3 Indicators of pydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	vdric Soils: ³ (12) Ition and nt, unless
Histosol (A1) Sandy Gleyed Matrix (S4) Coast Prairie Redox (A16) Histic Epipedon (A2) Sandy Redox (S5) Iron-Manganese Masses (F12) Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Other (Explain in Remarks) Thick Dark Surface (A12) Depleted Dark Surface (F7) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	12) Ition and nt, unless 2
□ Histic Epipedon (A2) ✓ Sandy Redox (S5) □ Iron-Manganese Masses (F12) □ Black Histic (A3) □ Stripped Matrix (S6) □ Dark Surface (S7) □ Hydrogen Sulfide (A4) □ Loamy Mucky Mineral (F1) □ Very Shallow Dark Surface (TF12) □ Stratified Layers (A5) □ Loamy Gleyed Matrix (F2) □ Other (Explain in Remarks) □ 2 cm Muck (A10) □ Depleted Matrix (F3) □ Other (Explain in Remarks) □ Depleted Below Dark Surface (A11) □ Redox Dark Surface (F6) □ □ Thick Dark Surface (A12) □ Depleted Dark Surface (F7) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. □ 5 cm Mucky Peat or Peat (S3) □ Coast Praine Redox (A10) 3	12) Ition and nt, unless
Black Histic (A3) Stripped Matrix (S6) Dark Surface (S7) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Very Shallow Dark Surface (TF12) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Other (Explain in Remarks) Depleted Below Dark Surface (A10) Depleted Dark Surface (F6) Other (Explain in Remarks) Thick Dark Surface (A12) Depleted Dark Surface (F7) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Peat or Peat (S3) Some Mucky Peat or Poblematic. Stripped Matrix (F8)	tion and nt, unless
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) Dark Surface (S7) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Very Shallow Dark Surface (TF12) 2 cm Muck (A10) Depleted Matrix (F3) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Mucky Peat or Peat (S3) Sandy Surface (S1) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	tion and nt, unless
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Very Shallow Dark Surface (TF12) 2 cm Muck (A10) Depleted Matrix (F3) Other (Explain in Remarks) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. S cm Mucky Peat or Peat (S3) Sandy Mucky Peat or Pole (S3) Sandy Mucky Peat or Peat (S3)	ttion and int, unless
2 cm Muck (A10) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Sandy Mucky Mineral (S1)	ition and int, unless :
Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Sandy Mucky Mineral (S1)	ition and int, unless 2.
 Depleted below bark Surface (A12) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) S cm Mucky Peat or Peat (S3) 	ation and int, unless 2.
Image: Markey Mineral (S1) Image: Depieted Dark Surface (F7) Sandy Mucky Mineral (S1) Redox Depressions (F8) 5 cm Mucky Peat or Peat (S3) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	ation and int, unless :
Sandy Mucky Mineral (S1) Redox Depressions (F8) wetland hydrology must be present, unless disturbed or problematic.	nt, unless ک
5 cm Mucky Peat or Peat (S3) alsturbed or problematic.	
Restrictive Layer (if observed):	
Type:	es X No
Depth (inches):	
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required: check all that apply) Secondary Indicators (minimum of two re	mum of two required)
Surface Water (A1) Water-Stained Leaves (B9)	(B6)
High Water Table (A2)	310)
✓ Saturation (A3) True Aquatic Plants (B14) Drv-Season Water Table (C2)	able (C2)
Water Marks (B1) Hvdrogen Sulfide Odor (C1) Cravfish Burrows (C8)	8)
Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Saturation Visible on Aerial Imag.(C	Aerial Imag.(C9)
Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1)	Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorphic Position (D2)	ו (D2)
□ Iron Deposits (B5) □ Thin Muck Surface (C7) ▼ FAC-Neutral Test (D5)	15)
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9)	
Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks)	
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes X No Depth (inches): 6 Wetland Hydrology Present? Yes X	Yes <u>X</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: The area displayed indicators of wetland hydrology.	

Project/Site: G	Fretna Bottoms			City/Cou	nty:	Sarpy Cour	nty	Sampling D	ate:	4/30/20)15	
Applicant/Owner:	Lyman-Riche	y Corporation				State	: NE	Sampling F	oint:	S-21		
Investigators:	Ben Fisher		Austin Ziglei			Section, Tov	wnship, Range	S 9	Г 13N	R	10E	
Landform (hillslope	e, terrace, etc.):	Hillslope				Local Re	lief (concave, c	onvex, none	∍): C	onvex		
Slope(%): 2	Lat:	41.1037264344	34	Long:	-96.30460067	26108	Datum:	NAD 1983				
Soil Map Unit Nam	ie: Gibbon lo	amy fine sand, ov	erwash, occ	asionally flo	oded		NWI Classifica	tion: Non	е			
Are climatic / hydro	ologic conditions	on the site typical	for this time	of year?	Yes X	No	(If No, expl	ain in Rema	arks)			
Are Vegetation	, Soil,	Hydrology	, significant	ly disturbed	1?	Are "Normal	Circumstances	" present?	Yes	; X	No	
Are Vegetation	, Soil,	Hydrology	, naturally p	oroblematic	?	(If needed,	explain any an	swers in Re	marks	5.)		
SUMMARY O	F FINDINGS	- Attach a site	e map sh	owing sa	ampling po	int locatio	ons, transec	ts, impo	rtant	featu	res, et	c.
Hydrophytic Vege	etation Present?	Yes	No X					•				
Hydric Soil Prese	ent?	Yes	No X	Is the within	Sampled Area a Wetland?	l	Vac	No	v			
Wetland Hydrolog	gy Present?	Yes	No X		a monana i		res					
Remarks:												
The area characte hydrophytic veget	erized by this data ation, hydric soils	a form is an uplan s, and wetland hyd	d area adjao Irology.	cent to the v	vetland charac	terized in S-2	20. The area fai	led to displa	ay indi	cators o	of	
VEGETATION	L Use scient	ific names of p	lants.	Absolute	Dominant	Indicator						
Troo Stratum		-		<u>% Cover</u>	<u>Species</u>	Status	Dominance	Test Work	sheet	:		
							That Are OE	BL, FACW, o	or FAC): 	1	(A)
Shrub Stratum												
Herb Stratum	(Plot size	e: <u>6 Ft</u>)					I otal Numbe Species Acro	er of Domina	ant .a:		2	(B)
Bromus inel	ermis				— <u>Y</u>	FACU	-					_ ` `
Carex festu	icacea				N	FACW	Percent of D	ominant Sp	ecies	••	50.0%	(A/B)
				100	=Total Cove	r		L, I AOW, C		·		
Vine Stratum							Prevalence	Index Worl	shee	t:		
							Total %	Cover of:		Multi	iply by:	
							OBL species	;	0	_ x 1 =	0	
							FACW speci	es	10	_ x 2 =	20	
							FAC species	;	30	_ x 3 =	90	
							FACU speci	es	60	x 4 =	240	
							UPL species		0	_ x 5 =	0	
							Column Tota	ls:	100	_(A)	350	(B)
							Preval	ence Index	= <i>B</i> /A	=	3.50	
							Hydrophytic	Vegetatior	ı Indic	ators:		
							Rapid Te	est for Hydr	ophyti	c Veget	ation	
							Dominar	nce Test > 5	50%			
							Prevaler	nce Index ≤	3.0			
							Morphol data in F	ogical Adap Remarks or	tation on a s	s (Prov separate	ide supp sheet)	oorting
							Problem	atic Hydrop	nytic \	vegetati	on (Exp	piain)
							be present,	t hydric soll unless disti	and w urbed	or probl	ematic.	jy must
							Hydroph Vegetation I	nytic Present?	Yes		No)	x
Remarks: (Include The area fails to n	e photo numbers meet hydrophytic	here or on a sepa	rate sheet.)									



Profile Descr	ription: (Des	cribe to the	depth nee	ded to document	the ind	icator or	confirm	the absence of Indicators.)			
Depth		Matrix		R	edox Fe	atures					
(inches)	Color	(moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Rem	narks	
0 to 6	10YR	4/2	100					SAND			
6 to 14	10YR	5/1	100					SAND			
14 to 18	10YR	3/1	95	7.5YR 4/6	5	С	М	LOAMY SAND			
¹ Type: C=Cor	ncentration, D	=Depletion,	RM=Reduc	ced Martix, CS=Co	overed o	r Coated	Sand Gra	ains. ² Location: PL=Pore Linir	ng, M=Matrix.		
Hydric Soil I	Indicators:							Indicators for Problematic	Hydric Soil	s: ³	
Histosol (A	.1)			Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A16)			
Histic Epip	edon (A2)			Sandy Redox (S5	5)				(12)		
Black Histi	c (A3)			Stripped Matrix (S	56)				12)		
	Sulfide (A4)		Γ	Loamy Mucky Mi	, neral (F1)			Dark Surface (S7)			
Stratified I	avers $(\Delta 5)$				atrix (F2)			Very Shallow Dark Surface	(TF12)		
	(A 10)							Other (Explain in Remarks)			
	(A10)			Depleted Matrix (F3)						
	Below Dark Sur	face (A11)	L	_ Redox Dark Surfa 	ace (F6)						
Thick Dark	Surface (A12)			Depleted Dark Su	urface (F7)		3 Indicators of hydrophytic va	notation and		
Sandy Mud	cky Mineral (S1)		Redox Depressio	ns (F8)			wetland hydrology must be pr	esent, unless		
5 cm Muck	xy Peat or Peat	(S3)						disturbed or problem	atic.		
Restrict	ive Layer (if observe	d):								
Туре:								Hudria Sail Present?	Vac	No. Y	~
Depth (incl	hes):							nyunc son riesent?	165		<u> </u>
HYDROLOG Wetland Hyd Primary India	GY drology Indi cators (minim	icators: um of one is	required: c	heck all that apply	/)			Secondary Indicators (m	inimum of tw	o required	
	otor (A1)				dloovos	(B0)			cks (B6)	e required	.,
	r Tabla (A2)				n (B12)	(69)			s (B10)		
					a (DIS) Diante (R	14)		Dranage Fattern	er Table (C2)		
	(A3) ka (B1)				fide Odor	(C1)			(C8)		
	NS (DT)					along Livir	na Roots (i	(C3) Saturation Visible	on Aerial Ima	a (C9)	
	sits (B3)				educed li	ron (C4)	ig 10003 (1		sed Plants (D1)	9.(00)	
Algal Mat g	or Crust (B4)			Recent Iron R	eduction	in Plowed :	Soils (C6)		ition (D2)		
	sits (B5)			Thin Muck Su	urface (C7	')	0000	EAC-Neutral Tes	t (D5)		
	Visible on Aer	ial Imagerv (B	7)	Gauge or We	II Data (D	, 9)			- ()		
Sparsely V	egetated Conc	ave Surf. (B8)		Other (Explain	n in Rema	arks)					
Field Observ	vations:										
Surface Wat	er Present?	Yes	No	X Depth	(inches):			_			
Water Table	Present?	Yes	No	X Depth	(inches):			_			
Saturation P	resent?	Yes	No	X Depth	(inches):			Wetland Hydrology Present	? Yes _	No_>	K
Describe Recor	ded Data (stre	am gauge, mo	nitoring well,	aerial photos, previo	ous inspe	ctions), if a	vailable:				-
Remarks:											
The area failed	d to display ind	icators of wetl	and hydrolog	у.							

Project/Site:	Gretna Bottoms		City/	Count	y:	Sarpy Cour	nty	Sampling [Date:	4/30/20)15	
Applicant/Owner	: Lyman-Riche	y Corporation				State	E NE	Sampling	Point:	S-22		
Investigators:	Ben Fisher	Austin	Zigler			Section, Tov	wnship, Range	S 16	T 13N	R	10E	
Landform (hillslo	pe, terrace, etc.):	Depression				Local Rel	lief (concave, c	onvex, non	e): C	oncave		
Slope(%): 0	Lat:	41.1022327675993	Lo	ng: -	96.30401556	60066	Datum:	NAD 1983				
Soil Map Unit Na	ame: Gibbon lo	amy fine sand, overwash	n, occasional	ly floo	ded		NWI Classifica	tion: Nor	ie			
Are climatic / hyc	drologic conditions	on the site typical for this	s time of year	r?	Yes X	No	(If No, expl	lain in Rem	arks)			
Are Vegetation	, Soil,	Hydrology, signi	ficantly distu	rbed?	ŀ	Are "Normal	Circumstances	present?	Yes	s X	No	
Are Vegetation	, Soil,	Hydrology, natu	rally problem	atic?		(If needed.	explain any an	swers in Re	emark	s.)		
SUMMARY		- Attach a site mar	showing	n san	nnlina noi	nt locatio	ons transec	ts imno	rtant	foatu	ras at	r
Hvdrophytic Ve	egetation Present?	Yes No	x	y san			113, transec	, impo	<u>i tant</u>	Teatu	C 3, Cl	
Hydric Soil Pre	sent?	Yes X No	ls :	the Sa	ampled Area							
Wetland Hydro	logy Present?	Yes No	wi	thin a	Wetland?		Yes	No	X	_		
Remarks:												
The area charac of Fairview Roa	cterized by this data d. The area display	a form is an upland area red indicators of hydric s	adjacent to t oil; however, Absol	the we the an	etland charact rea failed to n	erized in S-2 neet hydroph	23. The area is nytic vegetation	located in a and wetlar	a grass nd hyd	ed wate rology ci	rway so riteria.	outh
VEGETATIO	N – Use scient	ific names of plants	· <u>% Co</u>	ver	Species	Status	Dominance	Test Work	sheet	:		
Tree Stratum	m						Number of D That Are OE	Dominant S BL, FACW,	pecies or FA(;):	0	(A)
Herb Stratum	<u></u>						Total Numbe	ar of Domin	ant			
Bromus i	ermis	e: <u>6Ft</u>)		70	v	FACU	Species Acro	oss all Stra	ta:		1	(B)
Carex fes	stucacea			15	- <u> </u>	FACW	-					_
Festuca a	arundinacea			10	N	FACU	 Percent of D That Are OB 	ominant Sp L, FACW, o	ecies or FAC	:	0.0%	(A/B)
Trifolium	repens			5	Ν	FACU		, - ,				
				100	=Total Cover		Prevalence	Index Wor	kshee	t:		
Vine Stratum	_						Total %	Cover of:		Multi	ply by:	
							OBL species	s	0	_ X 1 =		
							FACW speci	es	15	_ x 2 =	30	
							FAC species	s	0	x3=	0	
							FACU spec	ies	85	_ x 4 =	340	
							UPL species	6	0	_ x 5 =	0	
							Column Tota	als:	100	(A)	370	(B)
							Preval	lence Index	= <i>B/A</i>	=	3.70	
							Hydrophytic	Vegetatio	n India	ators:		
							Rapid T	est for Hvd	rophyti	c Veaet	ation	
							 Dominar	nce Test >	50%	0		
							Prevaler	nce Index ≤	3.0			
							Morphol data in F Problem	ogical Ada Remarks or atic Hydrop	otation on a s	s (Provi separate Vegetati	ide supp sheet) on (Ex	porting
							Indicators o be present,	f hydric soi unless dist	l and v urbed	vetland h or probl	uydrolog ematic.	gy must
Remarks: (Inclu	de photo numbers	here or on a separate sh	neet.)				Hydroph Vegetation I	nytic Present?	Yes		<u>No</u>	<u>x</u>
The area is dom	ninated by upland v	regetation.	,									



SOIL

(inches) Color (m	oist)	%	Color (moist)	%	Type 1	Loc ²	Texture	Remarks			
to 8 10YR	3/2	100					LOAMY SAND				
to 16 10YR	4/1	90	7.5YR 4/6	10	С	М	LOAMY SAND				
6 to 22 10YR	2/1	98	7.5YR 4/6	2	C	M	SILTY CLAY LOAM				
ype: C=Concentration, D=D	epletion, R	M=Reduc	ced Martix, CS=C	overed or	Coated S	Sand Grai	ns. ² Location: PL=Pore Lining,	M=Matrix.			
ydric Soil Indicators:							Indicators for Problematic H	vdric Soile: 3			
Histosol (A1)			Sandy Gleyed M	atrix (S4)				yune sons.			
Histic Epipedon (A2)		Γ	Sandy Redox (S	5)			Coast Prairie Redox (A16)	、 、			
Black Histic (A3)			Stripped Matrix (5) S6)			Iron-Manganese Masses (F12)			
Hydrogen Sulfide (A4)			Loamy Mucky Mi	ineral (F1)			Dark Surface (S7)				
Stratified Levers (AE)							Very Shallow Dark Surface (TI	F12)			
							Other (Explain in Remarks)				
	<i></i>		Depleted Matrix ((F3)							
Depleted Below Dark Surface	e (A11)	L	Redox Dark Surf	ace (F6)							
Thick Dark Surface (A12)		L	Depleted Dark S	urface (F7))		³ Indicators of hydrophytic vogot	ation and			
Sandy Mucky Mineral (S1)			Redox Depression	ons (F8)			wetland hydrology must be pres	ent, unless			
5 cm Mucky Peat or Peat (S3)						disturbed or problemati	ic.			
Restrictive Layer (if o	bserved)	:									
Туре:											
							Hydric Soil Present? V	les X No			
Depth (inches): marks: he observed soil profile meets h	ydric soil cri	teria.					Hydric Soil Present? Y	′es <u>X</u> No_			
Depth (inches): marks: he observed soil profile meets h CDROLOGY Tetland Hydrology Indicat	nydric soil crii	teria.					Hydric Soil Present? Y	′es <u>X</u> No _			
Depth (inches): marks: he observed soil profile meets h /DROLOGY etland Hydrology Indicat rimary Indicators (minimum	ors: of one is re	teria. equired; c	heck all that appl	y)			Hydric Soil Present? Y	imum of two requi			
Depth (inches): marks: he observed soil profile meets h //DROLOGY fetland Hydrology Indicat rimary Indicators (minimum] Surface Water (A1)	nydric soil crit ors: of one is re	teria. equired; c	heck all that appl	y) ed Leaves ((B9)		Hydric Soil Present? Y	imum of two requi			
Depth (inches): marks: he observed soil profile meets h TDROLOGY (etland Hydrology Indicat rimary Indicators (minimum] Surface Water (A1)] High Water Table (A2)	nydric soil crit ors: of one is re	teria. equired; c	heck all that appl	y) Id Leaves (a (B13)	(B9)		Hydric Soil Present? Y Secondary Indicators (mini Surface Soil Cracks Drainage Patterns (imum of two requires (B6) B10)			
Depth (inches): marks: he observed soil profile meets he TDROLOGY etland Hydrology Indicat rimary Indicators (minimum] Surface Water (A1)] High Water Table (A2)] Saturation (A3)	nydric soil crii ors: of one is re	teria.	heck all that appl Water-Staine	y) ed Leaves (a (B13) Plants (B1	(B9) (4)		Hydric Soil Present? Y	imum of two requines (B6) B10) Table (C2)			
Depth (inches): marks: he observed soil profile meets h //DROLOGY fetland Hydrology Indicat rimary Indicators (minimum] Surface Water (A1)] High Water Table (A2)] Saturation (A3)] Water Marks (B1)	nydric soil crii ors: of one is re	teria.	heck all that appl Water-Staine Aquatic Faun True Aquatic Hydrogen Su	y) d Leaves (a (B13) Plants (B1 lfide Odor	(B9) (4) (C1)		Hydric Soil Present? Y Secondary Indicators (mini Surface Soil Cracks Drainage Patterns (Dry-Season Water Crayfish Burrows (C	imum of two requines (B6) B10) Table (C2) C8)			
Depth (inches): marks: he observed soil profile meets he DROLOGY etland Hydrology Indicat rimary Indicators (minimum] Surface Water (A1)] High Water Table (A2)] Saturation (A3)] Water Marks (B1)] Sediment Deposits (B2)] Drift Deposits (B2)	ors: of one is re	teria.	heck all that appl Water-Staine Aquatic Faun True Aquatic Hydrogen Su	y) ed Leaves (a (B13) Plants (B1 Ifide Odor (zospheres	(B9) (4) (C1) along Livin	g Roots (C	Hydric Soil Present? Y Secondary Indicators (mini Surface Soil Cracks Drainage Patterns (Dry-Season Water Crayfish Burrows (C S) Saturation Visible o	imum of two requines (B6) B10) Table (C2) C8) n Aerial Imag.(C9)			
Depth (inches):	nydric soil crit ors: of one is re	teria.	theck all that appl Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi: Presence of I	y) ed Leaves (a (B13) Plants (B1 lífide Odor zospheres Reduced Ir	(B9) (4) (C1) along Livin ron (C4)	g Roots (C6)	Hydric Soil Present? Y Secondary Indicators (mini Surface Soil Cracks Drainage Patterns (Dry-Season Water Crayfish Burrows (C Saturation Visible o Stunted or Stressed	imum of two requines (B6) B10) Table (C2) C8) n Aerial Imag.(C9) d Plants (D1) to (D2)			
Depth (inches): marks: he observed soil profile meets h TDROLOGY etland Hydrology Indicat rimary Indicators (minimum] 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)	ors: of one is re	teria.	heck all that appl Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F	y) d Leaves (a (B13) Plants (B1 lfide Odor (zospheres Reduced Ir Reduced Ir Reduction in	(B9) (C1) along Livin ron (C4) in Plowed S	g Roots (C Soils (C6)	Hydric Soil Present? Y Secondary Indicators (mini Surface Soil Cracks Drainage Patterns (Drainage Patterns (Dry-Season Water Crayfish Burrows (C Saturation Visible o Stunted or Stressed ✓ Geomorphic Positio FAC-Neutral Test (f	imum of two requines (B6) B10) Table (C2) C8) n Aerial Imag.(C9) d Plants (D1) on (D2) C5)			
Depth (inches): marks: he observed soil profile meets he CDROLOGY fetland Hydrology Indicat rimary Indicators (minimum 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) Joundation Visible on Aerial In	ors: of one is re	equired; c	heck all that appl Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhiz Presence of Recent Iron F Thin Muck S	y) ed Leaves (a (B13) Plants (B1 lfide Odor (zospheres Reduced Ir Reduced Ir Reduction in urface (C7)	(B9) (C1) along Livin ron (C4) in Plowed S) 9)	g Roots (C Soils (C6)	Hydric Soil Present? Y Secondary Indicators (mining Surface Soil Cracks) Drainage Patterns (Drainage Patterns (Dry-Season Water Crayfish Burrows (C Saturation Visible o Stunted or Stressed Y Geomorphic Positio FAC-Neutral Test (free	imum of two requines (B6) B10) Table (C2) C8) n Aerial Imag.(C9) d Plants (D1) in (D2) D5)			
Depth (inches): marks: he observed soil profile meets he DROLOGY etland Hydrology Indicat rimary Indicators (minimum 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 Ir Sparsely Vegetated Concave	nagery (B7) Surf. (B8)	teria.	heck all that appl Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Recent Iron F Gauge or We Other (Explai	y) ed Leaves (a (B13) Plants (B1 lfide Odor i zospheres Reduced Ir Reduced Ir Reduction i urface (C7) ell Data (DS	(B9) (C1) along Livin ron (C4) in Plowed S) 9) urks)	g Roots (C Soils (C6)	Hydric Soil Present? Y Secondary Indicators (mining and the second argument of t	imum of two requires (B6) B10) Table (C2) C8) n Aerial Imag.(C9) d Plants (D1) on (D2) D5)			
Depth (inches): marks: he observed soil profile meets he TDROLOGY etland Hydrology Indicat rimary Indicators (minimum 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 Ir Sparsely Vegetated Concave eld Observations:	nydric soil crii ors: of one is re nagery (B7) Surf. (B8)	equired; c	heck all that appl Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Recent Iron F Gauge or We Other (Explai	y) ed Leaves (a (B13) Plants (B1 Ifide Odor zospheres Reduced Ir Reduced Ir Reduced Ir Reduction in urface (C7) ell Data (DS	(B9) (C1) along Livin ron (C4) in Plowed S) 9) urks)	g Roots (C Soils (C6)	Hydric Soil Present? Y Secondary Indicators (mini Surface Soil Cracks Drainage Patterns (Dry-Season Water Crayfish Burrows (C Saturation Visible o Stunted or Stressed Geomorphic Positio FAC-Neutral Test (I	imum of two requines (B6) B10) Table (C2) C8) n Aerial Imag.(C9) d Plants (D1) on (D2) D5)			
Depth (inches): marks: he observed soil profile meets h (DROLOGY (etland Hydrology Indicat rimary Indicators (minimum 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 Ir Sparsely Vegetated Concave eld Observations: Surface Water Present?	nydric soil crit ors: of one is re nagery (B7) Surf. (B8) Yes	equired; c	heck all that appl Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Recent Iron F Gauge or We Other (Explai	y) ed Leaves (a (B13) Plants (B1 lfide Odor i zospheres Reduced Ir Reduction ii urface (C7) ell Data (D9 in in Rema (inches):	(B9) (C1) along Livin ron (C4) in Plowed S) 9) urks)	g Roots (C Soils (C6)	Hydric Soil Present? Y	imum of two requir s (B6) B10) Table (C2) C8) n Aerial Imag.(C9) d Plants (D1) on (D2) D5)			
Depth (inches): marks: he observed soil profile meets h TDROLOGY etland Hydrology Indicat rimary Indicators (minimum] 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 Ir] Sparsely Vegetated Concave eld Observations: Surface Water Present? Water Table Present?	nagery (B7) Surf. (B8) Yes	equired; c	theck all that appl Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Thin Muck S Gauge or We Other (Explain X Depth X Depth	y) ed Leaves (a (B13) Plants (B1 lfide Odor of zospheres Reduced Ir Reduced Ir Reduction in urface (C7) ell Data (D8 in in Rema (inches): (inches):	(B9) (C1) along Livin ron (C4) in Plowed S) 9) urks)	g Roots (C Soils (C6)	Hydric Soil Present? Y Secondary Indicators (mining and the secondary (mining	imum of two requines (B6) B10) Table (C2) C8) n Aerial Imag.(C9) d Plants (D1) on (D2) D5)			
Depth (inches): marks: he observed soil profile meets h TDROLOGY etland Hydrology Indicat rimary Indicators (minimum] 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 Ir] Sparsely Vegetated Concave eld Observations: Surface Water Present? Water Table Present? Water Table Present?	nagery (B7) Surf. (B8) Yes Yes	equired; c	theck all that apply Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Thin Muck Si Gauge or We Other (Explained) X Depth X Depth X Depth	y) ed Leaves (a (B13) Plants (B1 lfide Odor of zospheres Reduced Ir Reduced Ir Reduction in urface (C7) ell Data (DS in in Rema (inches): (inches): (inches):	(B9) (C1) along Livin ron (C4) in Plowed S) 9) ırks)	g Roots (C Soils (C6)	Hydric Soil Present? Y Secondary Indicators (mining) Surface Soil Cracks Drainage Patterns (Drainage Patterns (Dry-Season Water Crayfish Burrows (C Stunted or Stressed Y Geomorphic Positio Stunted or Stressed Y Geomorphic Positio FAC-Neutral Test (I Wetland Hydrology Present?	imum of two requines (B6) B10) Table (C2) C8) n Aerial Imag.(C9) d Plants (D1) on (D2) D5) Yes No			
Depth (inches): marks: he observed soil profile meets h (DROLOGY (etland Hydrology Indicat rimary Indicators (minimum] 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 Ir] Sparsely Vegetated Concave eld Observations: Surface Water Present? Water Table Present? Saturation Present?	ngery (B7) Surf. (B8) Yes Yes Yes	teria.	theck all that appl Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Thin Muck Si Gauge or We Other (Explain Attended States) March States Depth Attended States) Call States Depth Attended States) Call States Call States C	y) d Leaves (a (B13) Plants (B1 lfide Odor (zospheres Reduced Ir Reduction in urface (C7) ell Data (DS in in Rema (inches): (inches): (inches): ous inspec	(B9) (C1) along Livin ron (C4) in Plowed S) 9) irks)	g Roots (C Soils (C6)	Hydric Soil Present? Y Secondary Indicators (mining Surface Soil Cracks) Drainage Patterns (Dry-Season Water Crayfish Burrows (C Stunted or Stressed Geomorphic Position FAC-Neutral Test (I Wetland Hydrology Present?	res X No immum of two requires (B6) B10) Table (C2) 28) n Aerial Imag.(C9) d Plants (D1) in (D2) D5) Yes No			
Depth (inches): marks: he observed soil profile meets he TDROLOGY fetland Hydrology Indicat rimary Indicators (minimum] 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 Ir] Sparsely Vegetated Concave eld Observations: Surface Water Present? Water Table Present? Water Table Present? Saturation Present?	nagery (B7) Surf. (B8) Yes Yes Yes gauge, monit	teria.	heck all that appl Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhiz Presence of I Recent Iron F Recent Iron F Gauge or We Other (Explain X Depth X Depth aerial photos, previ	y) d Leaves (a (B13) Plants (B1 lfide Odor zospheres Reduced Ir Reduced Ir Reduced Ir Reduced Ir (add the set of the set	(B9) (C1) along Livin ron (C4) in Plowed S) 9) irks) ctions), if av	g Roots (C Soils (C6)	Hydric Soil Present? Y	Yes X No imum of two requires (B6) B10) Table (C2) C8) n Aerial Imag.(C9) d Plants (D1) on (D2) D5) Yes No			
Depth (inches): marks: he observed soil profile meets h TDROLOGY fetland Hydrology Indicat rimary Indicators (minimum] 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 Ir] Sparsely Vegetated Concave eld Observations: Surface Water Present? Water Table Present? Water Table Present? Saturation Present? Scribe Recorded Data (stream of	nagery (B7) Surf. (B8) Yes Yes gauge, monit	teria.	check all that apply Water-Staine Aquatic Faun True Aquatic Hydrogen Su Oxidized Rhi: Presence of I Recent Iron F Thin Muck Si Gauge or We Other (Explained) X Depth X Depth aerial photos, previous	y) ed Leaves (a (B13) Plants (B1 lfide Odor i zospheres Reduced Ir Reduction ii urface (C7) ell Data (DS in in Rema (inches): (inches): (inches): ous inspec	(B9) (4) (C1) along Livin ron (C4) in Plowed S) 9) urks) 	g Roots (C Soils (C6)	Hydric Soil Present? Y Secondary Indicators (mining and the secondary (mining and the seconda	res X No imum of two requires (B6) B10) Table (C2) C8) n Aerial Imag.(C9) d Plants (D1) on (D2) D5) Yes No			
Project/Site: G	Fretna Bottoms		City/Cour	nty:	Sarpy Cour	ity S	Sampling Da [.]	te: 4	/30/20	15	
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Applicant/Owner:	Lyman-Richey	y Corporation			State	: NE	Sampling Po	oint: 3	S-23		
Investigators:	Ben Fisher	Austin Zigle	r		Section, Tov	vnship, Range	S 16 T	13N	R 1	0E	
Landform (hillslope	e, terrace, etc.):	Depression			Local Rel	ief (concave, co	nvex, none):	: Cor	icave		
Slope(%): 0	Lat:	41.1021227354407	Long:	-96.30397561	28052	Datum:	NAD 1983				
Soil Map Unit Nam	ne: Gibbon loa	amy fine sand, overwash, occ	asionally floo	oded		NWI Classificat	ion: None				
Are climatic / hydro	ologic conditions of	on the site typical for this time	e of year?	Yes X	No	(If No, expla	ain in Remarl	ks)			
Are Vegetation	, Soil,	Hydrology, significant	tly disturbed?	? /	Are "Normal	Circumstances"	present?	Yes	Х	No	
Are Vegetation	, Soil,	Hydrology, naturally	oroblematic?		(If needed.	explain any ans	wers in Rem	narks.)			
SUMMARY O	F FINDINGS -	Attach a site map sh	owing sa	mplina poi	nt locatio	ns. transect	ts. import	ant f	eatur	es. et	c.
Hydrophytic Vege	etation Present?	Yes X No	<u>e</u>	<u></u>		<u>,</u>	<u>,</u>	<u>unit 1</u>	Jului	<u>,</u>	•
Hydric Soil Prese	ent?	Yes X No	Is the S	Sampled Area							
Wetland Hydrolog	gy Present?	Yes X No	within a	a wettand?		Yes X	No No				
Remarks:											
The area characte hydrophytic veget	erized by this data tation, hydric soils	a form is an emergent wetland , and wetland hydrology.	d located in a	a grassed wate	erway south o	of Fairview Roa	d. The area c	Jisplay	ed indi	icators o	of
VEGETATION	L Use scienti	fic names of plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominanco	Toot Workel	haati			
Tree Stratum			<u>,,,,,,,,,</u>	<u></u>	<u></u>	Number of D	ominant Sne				
Shrub Strotum						That Are OB	L, FACW, or	FAC:		3	(A)
Horb Stratum						Total Numbo	r of Dominan	\ +			
Phalaris ar	(PIOT SIZE	e: <u>6 Ft</u>)	40	v	FACW	Species Acro	ss all Strata:	:		3	(B)
Carex festu	Icacea			- <u> </u>	FACW	-					
Eleocharis	palustris		25	Y	OBL	Percent of Do That Are OBI	minant Spec	cies FAC:	1	100.0%	(A/B)
Bromus ine	ermis		10	N	FACU						
			100	=Total Cover		Prevalence I	ndex Works	heet:			
Vine Stratum						Total % 0	Cover of:		Multip	bly by:	
						OBL species	25	<u> </u>	x1=	25	
						FACW specie	es	<u> </u>	x 2 =	130	
						FAC species	0		x 3 =	0	
						FACU specie	≥s <u>1(</u>	J	x 4 =	40	
						UPL species	0		x 5 =	0	
						Column Tota	is:1(00 (A)	195	(B)
						Prevale	nce Index =	<i>B/A</i> =		1.95	
						Hydrophytic	Vegetation I	ndicat	ors:		
						Rapid Te	st for Hydrop	ohytic '	Vegeta	ition	
						X Dominan	ce Test > 50)%			
						X Prevalen	ce Index ≤ 3	.0			
						Morpholo	ogical Adapta	ations	(Provid	de supp	orting
						data in R	emarks or or	n a ser	arate	sheet)	
						Problema	atic Hydrophy	ytic Ve	getatio	n (Exp	plain)
						be present,	nydric soil a unless distur	nd wei	iand h proble	ydrology matic.	y must
						Hydroph Vegetation P	ytic resent?	Yes	x	No	
Remarks: (Include	e photo numbers l	nere or on a separate sheet.)				<u>I</u>					



Profile Descrip	ption: (Desc	ribe to the Matrix	depth ne	eded to do	cument	the indic	tures	confirm	the absence of Indicators.)	
Depth (inches)	Color	(moist)	%	Color (r	noist)	%	Type 1	Loc ²	Texture	Remarks
0 to 18	10YR	3/1	95	7 5YR	4/6	5	<u>.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	M	SANDY LOAM	
¹ Type: C=Conc	centration, D:	=Depletion,	RM=Red	uced Martix,	CS=Co	vered or	Coated	Sand Gra	ins. ² Location: PL=Pore Lini	ng, M=Matrix.
Hydric Soil In	ndicators:								Indicators for Problematic	<u>e Hydric Soils:</u> ³
Histosol (A1))			Sandy G	leyed Ma	trix (S4)			Coast Prairie Redox (A16)	
Histic Epiped	don (A2)			Sandy R	edox (S5))			Iron-Manganese Masses (F12)
Black Histic	(A3)			Stripped	Matrix (S	6)			Dark Surface (S7)	
Hydrogen Su	ulfide (A4)			Loamy N	lucky Min	eral (F1)				(TE10)
Stratified Lay	yers (A5)			Loamy G	leyed Ma	trix (F2)				(F 2)
2 cm Muck ((A10)			Depleted	l Matrix (F	-3)			Other (Explain in Remarks)
Depleted Be	low Dark Surf	ace (A11)		Redox D	ark Surfa	ce (F6)				
Thick Dark S	Surface (A12)			Depleted	l Dark Su	rface (F7)				
Sandy Muck	xy Mineral (S1)			Redox D	epressior	ns (F8)			³ Indicators of hydrophytic ve	egetation and
5 cm Mucky	Peat or Peat	S3)				- (-)			disturbed or probler	nesent, unless matic.
	ve Laver (if	observed	Ð:							
Type:			-,-							
Depth (inche	es):								Hydric Soil Present?	Yes X No
Remarks:										
HYDROLOGY	Y									
Wetland Hydr Primary Indica	rology India ators (minimu	ators: m of one is	required;	check all th	at apply)			Secondary Indicators (r	ninimum of two required)
Surface Wat	ter (A1)		•	Wate	er-Stained	/ Leaves (I	39)			acks (B6)
High Water	Table (A2)			Aqua	tic Fauna	(B13)	- /		Drainage Patter	ns (B10)
Saturation (A	43)			True	Aquatic F	Plants (B14	4)		Dry-Season Wa	ter Table (C2)
U Water Marks	s (B1)			Hydro	ogen Sulf	ide Odor (C1)		Crayfish Burrow	s (C8)
Sediment De	eposits (B2)			Oxidi	zed Rhizo	ospheres a	along Livir	ng Roots (0	C3) Saturation Visib	le on Aerial Imag.(C9)
Drift Deposit	ts (B3)			Prese	ence of R	educed Irc	on (C4)		Stunted or Stres	sed Plants (D1)
Algal Mat or	Crust (B4)			Rece	nt Iron Re	eduction ir	Plowed	Soils (C6)	Geomorphic Po	sition (D2)
Iron Deposite	s (B5)			L Thin	Muck Su	rface (C7)			✓ FAC-Neutral Te	st (D5)
Inundation V	isible on Aeria	al Imagery (B	7)	Gau	ge or Wel	l Data (D9)			
Sparsely Ve	getated Conca	ive Surf. (B8)		Othe	r (Explain	in Remar	ks)			
Field Observa	ntions:									
Surface Water	r Present?	Yes	۲ <u> </u>	No <u>X</u>	Depth (inches):			-	
Water Table P	Present?	Yes	۱ <u> </u>	No <u>X</u>	Depth (inches):		_	Wotland Hydrology Proson	+2 Vas V Na
Saturation Pre	esent?	Yes	<u> </u>	NO	Depth (inches):		2	wettand Hydrology Fresen	
Describe Recorde	ed Data (strea	m gauge, mo	nitoring we	ell, aerial photo	os, previo	us inspect	tions), if a	vailable:		
Remarks:		-6								
i he area display	yed indicators	or wetland hy	arology.							

Project/Site:	Gretna Bottoms			City/Coun	ty:	Sarpy Cour	ity S	Sampling Date:	4/30/20)15	
Applicant/Owner	: Lyman-Riche	y Corporation				State	: NE	Sampling Point:	S-24		
Investigators:	Ben Fisher	А	ustin Zigler			Section, Tov	vnship, Range	S 16 T 13N	I R	10E	
Landform (hillslo	pe, terrace, etc.):	Depression	n			Local Rel	ief (concave, co	onvex, none): C	Concave		
Slope(%): 0	Lat:	41.10239571552	295	Long:	-96.30277687	62319	Datum:	NAD 1983			
Soil Map Unit Na	me: Gibbon lo	amy fine sand, ove	erwash, occa	asionally floo	oded		NWI Classificat	tion: None			
Are climatic / hyc	Irologic conditions	on the site typical f	or this time	of year?	Yes X	No	(If No, expla	ain in Remarks)			
Are Vegetation	, Soil,	Hydrology,	significantly	y disturbed?	,	Are "Normal	Circumstances"	present? Ye	s X	No	
Are Vegetation	, Soil,	Hydrology,	naturally p	roblematic?		(If needed	explain any ang	wers in Remark	(s)		
SUMMARY		- Attach a site	man sho	wina sa	molina poi	nt locatio	ns transec	ts importan	t foatu	ras at	c
Hydrophytic Ve	getation Present?	Yes X N		wing sa		int looatio	113, 11411300	io, importan	reata	100, 00	0.
Hydric Soil Pres	sent?	Yes X N		Is the S	ampled Area						
Wetland Hydro	logy Present?	Yes X N		within a	a wetland?		Yes X	(No			
Remarks:											
The area charad hydrophytic veg	cterized by this data etation, hydric soils	a form is an emerg s, and wetland hydr	ent wetland rology.	located in a	grassed wate	rway south o	of Fairview Roa	d. The area disp	layed ind	dicators o	of
VEGETATIO	N- Use scient	ific names of pl	ants.	Absolute % Cover	Dominant Species	Indicator Status	Dominance '	Test Workshee	. .		
Tree Stratum							Number of D	Iominant Specie	 s		
Shrub Stratur	'n						That Are OB	L, FACW, or FA	C: _	2	(A)
Horb Stratum	<u>"</u>						Total Numbo	r of Dominant			
Trebs lat	(PIOT SIZ	e: <u>6Ft</u>)		20	V		Species Acro	oss all Strata:		2	(B)
Schoenou	plectus tabernaemont	ani			- <u> </u>		-		_		_
Phalaris	arundinacea				N	FACW	Percent of Do	pminant Species	<u>.</u>	100.0%	(A/B)
Urtica dic	pica			10	N	FACW		_, 1 AOW, 011 A	<i>.</i>		_
Carex fee	stucacea			5	N	FACW	Prevalence I	ndex Workshee	et:		
				80	=Total Cover		Total % (Cover of:	Mult	iply by:	
Vine Stratum	_						OBL species	50	x 1 =	50	
							FACW specie	es <u>30</u>	x 2 =	60	
							FAC species	0	x 3 =	0	
							FACU specie	es 0	x 4 =	0	
							UPL species	0	x 5 =	0	
							Column Tota	ls: 80	(A)	110	(B)
							Prevale	ence Index = B/A	<i>f</i> =	1.38	
							Hydrophytic	Vegetation Indi	cators:		
							X Rapid Te	est for Hydrophyl	ic Veaet	ation	
							X Dominan	ice Test $> 50\%$			
							X Prevalen	ce Index ≤ 3.0			
							Morpholo	ogical Adaptation	າs (Prov	ide supp	ortina
							data in R Problema	emarks or on a atic Hydrophytic	separate Vegetati	sheet) on (Exp	plain)
							Indicators of be present,	hydric soil and unless disturbed	wetland or probl	hydrolog ematic.	y must
							Hydroph Vegetation P	ytic Present? Yes	5 X	No	
Remarks: (Inclu	de photo numbers	here or on a separ	ate sheet.)								



Profile Description: (Describe to the		
Tome Description. (Describe to the t	depth needed to document the indicator or confir	rm the absence of Indicators.)
Depth Matrix	Redox Features	
(inches) Color (moist)	<u>%</u> Color (moist) <u>%</u> Type ¹ Loc ³	² Texture Remarks
ype: C=Concentration, D=Depletion, F	RM=Reduced Martix, CS=Covered or Coated Sand (Grains. ² Location: PL=Pore Lining, M=Matrix.
lydric Soil Indicators:		Indicators for Problematic Hydric Soils: ³
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	☐ Iron-Manganese Masses (F12)
Black Histic (A3)	Stripped Matrix (S6)	Dark Surface (S7)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	
2 cm Muck (A10)	Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A11)	Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and
5 cm Mucky Peat or Peat (S3)		disturbed or problematic.
Restrictive Layer (if observed	():	
Туре:		
Depth (inches):		Hydric Soll Present? Yes X NO
YDROLOGY Vetland Hydrology Indicators:		
Primary Indicators (minimum of one is)	required; check all that apply)	Secondary Indicators (minimum of two required
Surface Water (A1)	Water-Stained Leaves (B9)	Surface Soil Cracks (B6)
 Surface Water (A1) High Water Table (A2) 	Water-Stained Leaves (B9) Aquatic Fauna (B13)	Surface Soil Cracks (B6)
 Surface Water (A1) High Water Table (A2) Saturation (A3) 	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) 	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) 	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root	 Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) ts (C3) Saturation Visible on Aerial Imag.(C9)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) 	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imag.(C9) Stunted or Stressed Plants (D1)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) 	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C	 Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imag.(C9) Stunted or Stressed Plants (D1) C6) Geomorphic Position (D2)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) 	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C Thin Muck Surface (C7)	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imag.(C9) Stunted or Stressed Plants (D1) C6) ✓ FAC-Neutral Test (D5)
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✓ 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 (B7 Sparsely Vegetated Concave Surf. (B8) Vield Observations: Surface Water Present? Yes Water Table Present? Yes Seturation Present? Yes Vescribe Recorded Data (stream gauge, morther Yes	Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Living Root Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Soils (C Thin Muck Surface (C7) Gauge or Well Data (D9) Other (Explain in Remarks) X No No Depth (inches): X No Depth (inches): 0 No Depth (inches): X No Depth (inches): 0 No Depth (inches): X No	Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imag.(C9) Stunted or Stressed Plants (D1) Stunted or Stressed Plants (D1) ✓ Geomorphic Position (D2) ✓ FAC-Neutral Test (D5)
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Sampling Point: S-24

Applicant/Owner Lynam Richay Corporation State Ne Sampling Point S.25 Investigators Ben Flaher Austin Zigler Socion Township, Rang S.16 Ne Socion Township, Rang S.16 Ne Singer Mills O Lat: 41.1024054007221 Long: -46.3028155287866 Datum: NAD (1983) No Solid Map Unit Name: Globon learny fins sand, overwash, occasionally licoded NWI Clossification: None Are Normal Circumstances' present? Yes No No Solid Map Unit Name: Solid - , Hydrology , ganificantly disubmed? Are Normal Circumstances' present? Yes No Are Solid Map Unit Name: Solid - , Hydrology , ganificantly disubmed? Are Normal Circumstances' present? Yes No X Solid Present? Yes No X No X No X Hydrolphylic Vogutation Present? Yes No X No X No X Solid Area Yes No X No X No X Hydrolphylic Vogutation Present? Yes No X No X	Project/Site:	Gretna Bottoms		City/Coun	ity:	Sarpy Cou	nty S	Sampling D	ate:	4/30/20)15	
Investigator: Ben Fisher Austin Zigler Section, Township, Range S 16 T 13N R 10E Landorm (Illishop, turrace, utc.): Top of Slope Local Relif (concave, convex, non): Non Investigator Non Stop Max 0 Late 41.102406400721 Long: -96.30281525766 Datum: NAD 1983 Non Investigator Non Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No	Applicant/Owner	: Lyman-Riche	ey Corporation			State	e: NE S	Sampling F	Point:	S-25		
Landom (hilistope, terrace, etc.): Top of Slope Local Relief (concave, corvex, none): None Slope (%): 0	Investigators:	Ben Fisher	Austin Zig	gler		Section, To	wnship, Range	S 16 1	Г 13N	R	10E	
Slope(%): 0 Lat: 41.1024054907921 Long: -96.3020155287866 Datum: NAD 1983 Soli Map Unit Name: Collabor learning time sand, overwash, occasionally licoded NW1 Classification: Name Are imade: / hydrology conditions on the slope(ato finitis time dyear) Yes X. No (If None) Are Vogelation Soli	Landform (hillslo	pe, terrace, etc.):	Top of Slope			Local Re	lief (concave, co	nvex, none	e): N	one		
Soil Map Unit Name: Gbbon learny fine sand, overwash, occasionally flooded MVI Classification: None Are climatic? MVI Classification: None MVI Classification: None Are Vagetation , Soil Hydrology , significantly disturbuted Are Nonal Circumstances? present? Yes X No Are Vagetation , Soil Hydrology , antwally problematic? (if needed, explain any answers in Remarks) SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrology Present? Yes No Hydric Signetern? Yes No X Is the Sampled Area within a Wetland? Yes No X Remarks: The area characterized by this data from is upland to the wetland characterized in S-24. The area failed to display indicators of hydric soil and wetland hydrology. Nower, the area net hydrophytic vegetation criteria. Status Dominant Indicator The Stratum (Plot size: 15FL) 0 Y FACW Total RML RACW, or FAC: 3 (A) That Stratum (Plot size: 15FL) 0 Y FACW FACW Total Cover of: Multiply by: Heinsthum (Plot size: 6.FL	Slope(%): 0	Lat:	41.1024054907921	Long:	-96.30281552	87866	Datum: N	NAD 1983	·			
Are climate / hydrologic conditions on the site typical for this time of year? Yes X No (If No. explain in Remarks) Are Vegetation	Soil Map Unit Na	ame: Gibbon lo	amy fine sand overwash o		oded		NWI Classificati	ion: None	e			
Are Vegetation , Soll , Hydrology , significanity disurbed? Are Normal Circumsances' present? Yes X No Are Vegetation , Soll , Hydrology , instructive problematic? (if needed, explain any answers in Remarks.) SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrolytic Vegetation Present? Yes X No Hydrology Yes No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Yes No X Is the Sampled Area within a Wetland? Yes No X Remarks: The area characterized by this data form is upland to the wetland characterized in S-24. The area failed to display indicators of hydric soil and wetland hydrology, however, the area met hydrophytic vegetation criteria. Dominant Status Dominant Species Multiply for Vegetation Present? Yes X (A) Cornus drummodil 10 Y FAC Dominant Species 100.0% (AB) Heidb Statum (Plot size: <u>5 Ft</u>) 0 Y FACW Precent of Dominant Species 100.0% (AB) Heidb Statum (Plot size: <u>5 Ft</u>) 10 N FACW	Are climatic / by	drologic conditions	on the site typical for this ti	me of year?		No	(If No evola		arke)			
Absolute	Are Vegetation	Soil	Hydrology signific	antly disturbed?			(ii 140, cxpic	nrecent?	V00	× ×	No	
Autor vegetation		, Soil	, Hydrology, significa	warahlamatia?	r r		Circumstances	present:	163		_ 110 _	
SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No X Wetland Hydrology Present? Yes No X Remarks: No X Is the Sampled Area within a Wetland? Yes No X Remarks: The area characterized by this data form is upland to the wetland characterized in S:24. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. Absolute Dominant Indicator VECETATION- Use scientific names of plants. Absolute Dominant Indicator Dominant Facure Status Dominant Total Number of Dominant Mubbr of Dominant Species Aross all Strata: 3 (b) Shub Straum (Plot size: 15FL) 0 Y FACW FACW Prevent of Dominant Species Aross all Strata: 3 (b) Metandhydraica 10 N FACW FACW Total Necets: Total Necets: Total Necets: Total Necets: 100.0% (A) Guita dicas annus 10 N FACW Prevalence Index Werksheet: <td>Are vegetation</td> <td>, Soli</td> <td>, Hydrology, naturali</td> <td>y problematic?</td> <td></td> <td>(If needed,</td> <td>explain any ans</td> <td>wers in Re</td> <td>marks</td> <td>s.)</td> <td></td> <td></td>	Are vegetation	, Soli	, Hydrology, naturali	y problematic?		(If needed,	explain any ans	wers in Re	marks	s.)		
Hydrophylic Vegetation Present? Yes No X Wetland Hydrology Present? Yes No X Remarks: The area characterized by this data form is upland to the wetland characterized in S-24. The area failed to display indicators of hydric soil and wetland tydrology; however, the area met hydrophytic vegetation criteria. Indicator: Status Dominant: Indicator: VECETATION - Use scientific names of plants. Absolute Dominant: Indicator: Status Dominant: Number of Dominant: Number of Dominant: Status Shrub Stratum (Plot size: 15Ft _) 0 Y FACW FACW Percent of Dominant: 3 (B) Parsicaria pensylvarica 20 Y FACW FACW Prevalence Index Worksheet: 3 (B) Remarks: 10 Y FACW FACW FACW Prevalence Index Worksheet: 3 (B) Quice adoica 10 N FACW FACW Total Number of Dominant Species 3 (A) Remarks: 10 N FACW FACW FACW FACW FACW FACW FACW FACW FACW FACW </td <td>SUMMARY</td> <td>OF FINDINGS</td> <td>- Attach a site map s</td> <td>showing sa</td> <td>mpling poi</td> <td>nt locatio</td> <td>ons, transect</td> <td>s, impoi</td> <td>rtant</td> <td>featu</td> <td>res, et</td> <td>с.</td>	SUMMARY	OF FINDINGS	- Attach a site map s	showing sa	mpling poi	nt locatio	ons, transect	s, impoi	rtant	featu	res, et	с.
Hydric Soll Present? Yes No X Yes No X Wetland Hydrology Present? Yes No X Yes No X Remarks: Remarks: Remarks: No X Yes No X Wetland Hydrology Present? Yes No X X X X Remarks: Remarks: Remarks: No X X X X Vestion JW Present? Yes No X X X X X Vestion JW Present? Yes No X X X X X X X Vestion JW Present Westand Hydrology Present? Yes No X <t< td=""><td>Hydrophytic Ve</td><td>egetation Present?</td><td>Yes X No</td><td>la tha S</td><td>omplad Area</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Hydrophytic Ve	egetation Present?	Yes X No	la tha S	omplad Area							
Weiland Hydrology Present? Yes No X Remarks: The area characterized by this data form is upland to the wetland characterized in S-24. The area failed to display indicators of hydric soil and wetland hydrology, however, the area met hydrophytic vegetation criteria. VEGETATION- Use scientific names of plants. Absolute % Cover Dominance Test Worksheet: Tree Stratum Number of Dominant Species 3 (A) Shrub Stratum (Plot size: _15FL) Total Number of Dominant Species 3 (A) Cornus dummondli 10 Y FAC FAC Prevalence Index Worksheet: Number of Dominant Species 100.0% (A) Unice dicina 30 Y FACW FAC Prevalence Index Worksheet: 100.0% (A) Unice dicina 30 Y FACW FACW Total Number of Dominant Species 100.0% (A) Weinex dispus 10 N FACW FACW Total % Cover of: Multiply by: 100.0% (A) 20 X = 120. FAC Wappelos 0 X = 120. <td>Hydric Soil Pre</td> <td>esent?</td> <td>Yes No X</td> <td>within a</td> <td>a Wetland?</td> <td></td> <td>Yes</td> <td>No</td> <td>x</td> <td></td> <td></td> <td></td>	Hydric Soil Pre	esent?	Yes No X	within a	a Wetland?		Yes	No	x			
Remarks: The area characterized by this data form is upland to the wetland characterized in S-24. The area failed to display indicators of hydric soil and wetland hydrology, however, the area met hydrophytic vegetation criteria. VEGETATIONUse scientific names of plants. Absolute X.Coxer Dominant Status Indicator Status Shub Stratum (Plot size: 15Ft_)) 0 Y FAC	Wetland Hydro	logy Present?	Yes No X						~	_		
The area characterized by this data form is upland to the wetland characterized in S-24. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. VEGETATION_Use scientific names of plants. Absolute Statum Shub Stratum (Plot size: 15Ft) Corrus drummondi 10 Y FAC Total Number of Dominant Species That Are OBL, FACW, or FAC:	Remarks:			-								
VEGETATION- Use scientific names of plants. Absolute %cover Dominant Species Indicator Status Dominance Test Worksheet: Tree Stratum (Plot size: 15Ft_))	The area charac hydrology; howe	cterized by this dat ever, the area met	a form is upland to the wetl hydrophytic vegetation crite	and characteriz eria.	ed in S-24. Th	ne area faile	d to display indic	ators of hy	dric s	oil and v	vetland	
Zebyter Species Status Dominance Test Worksheet: Iree Stratum Image: Stratum <td< td=""><td>VEGETATIC</td><td>N– Use scient</td><td>tific names of plants.</td><td>Absolute</td><td>Dominant</td><td>Indicator</td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	VEGETATIC	N – Use scient	tific names of plants.	Absolute	Dominant	Indicator						
Interstitution Number of Dominant Species 3 (A) Shrub Stratum (Plot size: 15Ft_) 10 Y FAC Total Number of Dominant Species 3 (A) Herb Stratum (Plot size: 6 Ft_) 0 Y FACW Percent of Dominant Species 3 (A) Unica dioica 30 Y FACW Percent of Dominant Species 100.0% (A/B) Persidaria pensylvanica 20 Y FACW Percent of Dominant Species 100.0% (A/B) Quere restructacea 10 N FACW Prevalence Index Worksheet: 100.0% (A/B) Rumex crispus 10 N FACW Total % Cover of: Multiply by: Multiply by: 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 0 N = 1 = 0 </td <td>Tree Chrothurs</td> <td></td> <td></td> <td><u>% Cover</u></td> <td><u>Species</u></td> <td><u>Status</u></td> <td>Dominance 1</td> <td>est Works</td> <td>sheet</td> <td>:</td> <td></td> <td></td>	Tree Chrothurs			<u>% Cover</u>	<u>Species</u>	<u>Status</u>	Dominance 1	est Works	sheet	:		
Shrub Stratum (Plot size: 15Ft _) Corrus drummondii 10 Y FAC 10	Tree Stratum	<u>l</u>					Number of Do That Are OBI	pminant Sp FACW c	becies	<u>`</u>	3	(A)
Cornus drummondii 10 Y FAC Total Number of Dominant 10=Total Cover 10=Total Cover Total Number of Dominant Species Across all Strata: 3	Shrub Stratur	<u>m</u> (Plot siz	e: <u>15Ft</u>)					_, , .				_
10 =Total Cover Species Across all Strata: 3 (B) Herb Stratum (Plot size: <u>6 Ft</u>)) Persicaria pensylvanica 20 Y FACW Percent of Dominant Species 100.0% (A/B) Persicaria pensylvanica 20 Y FACW FACW Pervalence Index Worksheet: Total % Cover of: Multiply by: Rumex crispus 10 N FACU OBL species 0 x1 = 0 Browns inermis 5 N FACU FACW FACU species 20 x3 = 60 Galium aparine 5 N FACU FACU FACU species 25 x4 = 100 Vine Stratum 95 =Total Cover 0 x5 = 0 column Totals: 105 (A) 280 (B) Vine Stratum 5 N FACU FACU Prevalence Index S 3.0 x1 = 0 0 column Totals: 105 (A) 280 (B) Vine Stratum 5 N FACU Prevalence Index S 3.0 X Revealence Index S 3.0 X Prevalen	Cornus d	Irummondii		10	Y	FAC	Total Number	of Domina	ant			
Herb Stratum (Plot size: <u>6 Ft</u>) Urtica dioica 30 Y FACW Persicaria pensylvanica 20 Y FACW Carexer (struczeca) 10 N FACW Helianthus annuus 10 N FACW Bromus inermis 5 N FACU Galtum aparine 5 N FACU 95 =Total Cover FACU Yine Stratum 95 =Total Cover Vine Stratum 105 N Facus 7 FACU 95 =Total Cover FACU 96 =Total Cover FACU FACU species 0 x5 = Vine Stratum 5 N FACU 95 =Total Cover FACU species 2.67 Hdrophytic Vegetation Indicators:				10	=Total Cover		Species Acros	ss all Strata	a:	_	3	(B)
Urtica dioica 30 Y FACW That Are OBL, FACW, or FAC: 100,0% (APB) Carex festucacea 10 N FACW Prevalence Index Worksheet: Prevalence Index Worksheet: Rumex crispus 10 N FACU OBL species 0 x1 = 0 Bromus inermis 5 N FACU F	Herb Stratum	<u>n</u> (Plot siz	e: <u>6 Ft</u>)				Percent of Do	minant Sp	ecies		400.00/	
Persicaria pensylvanica 20 Y FACW FACW Carex festucacea 10 N FACW Total % Cover of: Multiply by: Rumex crispus 10 N FAC OBL species 0 x1 = 0 Bromus inermis 5 N FACU FACU FACU species 20 x3 = 60 Gaium aparine 5 N FACU FACU species 20 x3 = 60 UPL species 0 x 5 = 0 x 5 = 0 UPL species 25 x4 = 100 UPL species 0 x 5 = 0 Column Totals: 105 (A) 280 (B) Prevalence Index ≤ 3.0 X Dominance Test > 50% X Prevalence Index ≤ 3.0 X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicator of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Yegetation Present? Yeg X No No	Urtica dic	oica		30	Y	FACW	That Are OBL	, FACW, o	r FAC	: _	100.0%	_(A/B)
Carex festucacea 10 N FACW Total % Cover of: Multiply by: Helianthus annuus 10 N FACU Total % Cover of: Multiply by: Bromus inermis 5 N FACU FACW FACW species 60 x2 = 120 Gaium aparine 5 N FACU FACU FACU species 20 x3 = 60 Gaium aparine 5 N FACU FACU FACU species 25 x4 = 100 Vine Stratum 95 =Total Cover 95 =Total Cover UPL species 0 x5 = 0 Vine Stratum 7 95 =Total Cover UPL species 0 x5 = 0 Vine Stratum 7 7 7 7 7 7 7 7 Vine Stratum 7 7 7 7 7 7 7 7 Vine Stratum 7 7 7 7 7 7 7 7 7 7 Vine Stratum 7 7 7 </td <td>Persicari</td> <td>a pensylvanica</td> <td></td> <td>20</td> <td>Y</td> <td>FACW</td> <td>Brovalanca li</td> <td>adax Wark</td> <td>rehoo</td> <td>*.</td> <td></td> <td></td>	Persicari	a pensylvanica		20	Y	FACW	Brovalanca li	adax Wark	rehoo	* .		
Helianthus annuus 10 N FACU Init % COVER of: Multiply by: Rumex crispus 10 N FAC OBL species 0 x1 = 0 Bromus inermis 5 N FACU FACU FACU species 0 x1 = 0 Galium aparine 5 N FACU FACU FACU species 20 x3 = 60 Vine Stratum 95 =Total Cover FACU FACU species 25 x4 = 100 UPL species 0 x5 = 0 x5 = 0 Corrector Corrector Column Totals: 105 (A) 280 (B) Prevalence Index = B/A= 2.67 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation X Deminance Test > 50% X Prevalence Index < 3.0	Carex fee	stucacea		10	N	FACW			Silee	L. N.A14	:	
Rumex crispus 10 N FAC OBL species 0 X 1 - 0 Bromus inermis 5 N FACU FACW species 60 X 2 = 120 Grisium arvense 5 N FACU FACU FAC species 20 X 3 = 60 Galium aparine 5 N FACU FACU species 25 X 4 = 100 UPL species 0 x 5 = 0 X 5 = 0 </td <td>Helianthu</td> <td>us annuus</td> <td></td> <td>10</td> <td><u>N</u></td> <td>FACU</td> <td></td> <td>over of:</td> <td>0</td> <td></td> <td></td> <td></td>	Helianthu	us annuus		10	<u>N</u>	FACU		over of:	0			
Bronus inermis 5 N FACU FACW species 60 x 2 = 120 Grisium arvense 5 N FACU F	Rumex c	rispus			N	FAC	OBL species		0	_ ^ ! -	120	
Clistum averise 3 N PACU FAC species 20 X 3 = 60 Galium aparine 5 N FAC FACU FACU PEACU FACU FACU species 25 X 4 = 100 Vine Stratum 95 =Total Cover 0 x 5 = 0 X 5 = 0 Vine Stratum 0 x 5 = 0 x 5 = 0 X 5 = 0 Vine Stratum 105 (A) 280 (B) Prevalence Index = B/A = 2.67 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Yes X No	Bromus i	inermis		<u>5</u>	N	FACU	FACW specie	S	60	_ X Z =	120	
Galadin apainte	Galiuma			5	N	FACU	FAC species		20	_ x 3 =	60	
Vine Stratum	Galiulii a	panne				TACO	FACU specie	es	25	_ x 4 =	100	
Vine Stratum Column Totals:105(A)280(B) Prevalence Index = B/A=2.67 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Y Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? YesXNo Remarks: (Include photo numbers here or on a separate sheet.) The area is dominated by bydrophytic vegetation					= I otal Cover		UPL species		0	_ x 5 =	0	
Prevalence Index = B/A= 2.67 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No	vine Stratum						Column Total	s:	105	(A)	280	(B)
Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No							Prevale	nce Index	= R/A		2 67	
Hydrophytic Vegetation Indicators:									,,,		2.01	
Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X Remarks: (Include photo numbers here or on a separate sheet.) The area is dominated by bydrophytic vegetation							Hydrophytic \	/egetation	Indic	ators:		
X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No							Rapid Te	st for Hydro	ophyti	c Veget	ation	
X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Hydrophytic Yes X Remarks: (Include photo numbers here or on a separate sheet.) Yes X No No No							X Dominan	ce Test > 5	50%			
Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X Remarks: (Include photo numbers here or on a separate sheet.) The area is dominated by hydrophytic vegetation							X Prevalence	ce Index ≤	3.0			
Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No The area is dominated by bydrophytic vegetation							Morpholo data in Re	gical Adap emarks or	tation on a s	s (Prov eparate	ide supp sheet)	orting
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) The area is dominated by hydrophytic vegetation							Problema	tic Hydrop	hytic \	/egetati	on (Exp	plain)
Hydrophytic Yes X No Remarks: (Include photo numbers here or on a separate sheet.) The area is dominated by hydrophytic venetation Venetation							Indicators of be present, u	hydric soil Inless distu	and v urbed	/etland l or probl	nydrolog ematic.	y must
Remarks: (Include photo numbers here or on a separate sheet.)							Hydrophy Vegetation P	/tic resent?	Yes	x	No	
	Remarks: (Inclu	ide photo numbers	here or on a separate shee	et.)								

Profile Descr	ription: (Des	cribe to the	e depth nee	eded to document	t the indi	cator or	confirm t	the absence of Indicators.)	
Depth (inches)	Color	(moist)	%	Color (moist)	%	Type 1	Loc ²	Texture Remarks	
	10/0	(110101)				Турс			
0 to 6		4/Z	100		·				
6 to 14	10YR	3/2	-100						
14 to 18		3/1	98	7.5YR 4/6	2			SANDY LOAM	
Type: C=Cor	icentration, L		, RIVI=Redu	iced Martix, CS=Co	overed or	Coated	Sand Gra	ains. 4 ocation: PL=Pore Lining, M=Matrix.	
Hydric Soil I	Indicators:		ſ	Condy Clayed M	otriv (C4)			Indicators for Problematic Hydric Soils: ³	
Histosol (A	(1)		l		atrix (54)			Coast Prairie Redox (A16)	
	edon (A2)		l	Sandy Redox (St	5)			Iron-Manganese Masses (F12)	
Black Histi	c (A3)		l	Stripped Matrix (3 Stripped Matrix (3)	S6)			Dark Surface (S7)	
Hydrogen S	Sulfide (A4)		l	Loamy Mucky Mi	neral (F1)			Very Shallow Dark Surface (TF12)	
Stratified L	ayers (A5).		l	Loamy Gleyed M	atrix (F2)			Other (Explain in Remarks)	
2 cm Muck	c (A10)		[Depleted Matrix ((F3)				
Depleted B	Below Dark Sur	face (A11)	[Redox Dark Surf	ace (F6)				
Thick Dark	Surface (A12)		[Depleted Dark S	urface (F7))		2	
Sandy Muc	cky Mineral (S1)	[Redox Depressio	ons (F8)			³ Indicators of hydrophytic vegetation and	
5 cm Muck	y Peat or Peat	(S3)						disturbed or problematic.	
Restrict	ive Layer (if observe	d):						
Туре:									
Depth (incl	hes):							Hydric Soil Present? Yes <u>No X</u>	
HYDROLOG	GY								
Wetland Hyd	drology Indi	icators:	roquirod	aback all that apply				Secondary Indicators (minimum of two required)	
	ators (minim	um of one is	s required;		y)				
Surface Wa	ater (A1)			Water-Staine	d Leaves (B9)		Surface Soil Cracks (B6)	
	r Table (AZ)				a (B13) Dianta (D1	4)			
	(A3)				Fiants (BT	4) (C1)			
	KS (DI) Donosita (P2)					along Livir	na Roote (((C3) Saturation Visible on Aerial Imag (C9)	
	sits (B3)				Reduced Ir	on (C4)	ig 10003 (0	Stunted or Stressed Plants (D1)	
Algal Mat g	or Crust (B4)			Recent Iron F	Reduction in	n Plowed :	Soils (C6)	Geomorphic Position (D2)	
Iron Depos	sits (B5)			Thin Muck Su	urface (C7))		FAC-Neutral Test (D5)	
Inundation	Visible on Aer	ial Imagery (E	37)	Gauge or We	ell Data (D9	9)			
Sparsely V	egetated Conc	ave Surf. (B8	;)	Other (Explai	n in Rema	rks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	N	o <u>X</u> Depth	(inches):			_	
Water Table	Present?	Yes	N	o X Depth	(inches):			_	
Saturation P	resent?	Yes	<u> </u>	o Depth	(inches):		14	Wetland Hydrology Present? Yes No_X	
Describe Recor	ded Data (stre	am gauge, m	onitoring wel	l, aerial photos, previ	ous inspec	tions), if a	vailable:		
Remarks: The area failed	d to meet wetla	nd hydrology	criteria The	area is elevated abo	ve the adia	acent eme	rgent wetla	and	
	eot would								



Project/Site:	Gretna Bottoms		City/Coun	ity:	Sarpy Cour	nty S	ampling Date:	4/30/2015	
Applicant/Owner:	Lyman-Riche	y Corporation			State	: <u>NE</u> 5	Sampling Point:	S-26	
Investigators:	Ben Fisher	Austin Zigle	er		Section, Tov	vnship, Range	S 9 T 13N	R 10E	
Landform (hillslop	pe, terrace, etc.):	Depression			Local Rel	ief (concave, cor	nvex, none): Co	ncave	
Slope(%): 0	Lat:	41.1034491493484	Long:	-96.31079154	55989	Datum: N	IAD 1983		
Soil Map Unit Na	me: Gibbon loa	amy fine sand, overwash, oc	casionally floo	oded		NWI Classificati	on: None		
Are climatic / hyd	Irologic conditions of	on the site typical for this time	e of year?	Yes X	No	(If No, expla	in in Remarks)		
Are Vegetation	, Soil,	Hydrology, significan	ntly disturbed?	? A	Are "Normal	Circumstances"	present? Yes	X No	
Are Vegetation	, Soil,	Hydrology, naturally	problematic?		(If needed.	explain any ans	wers in Remarks.)	
SUMMARY		- Attach a site man sh	nowing sa	mnling noi	nt locatio	ns transect	s important	, features (etc
Hydrophytic Ve	getation Present?	Yes X No			in looullo		o, important		
Hydric Soil Pres	sent?	Yes X No	Is the S	ampled Area					
Wetland Hydrol	ogy Present?	Yes X No	within a	a wetland?		Yes X	No	_	
Remarks:									
The area charac hydrophytic veg	cterized by this data etation, hydric soils	a form is an emergent wetlan s, and wetland hydrology.	d located in a	a drainage ditcl	h north of Fa	airview Road. The	e area displayed	indicators of	
VEGETATIO	N- Use scienti	ific names of plants.	<u>% Cover</u>	Species	Status	Dominance T	est Worksheet:		
Tree Stratum	(Plot size	e: <u>30 Ft</u>)				Number of Do	ominant Species	2	(A)
Morus rul	ora		10	Y	FACU	That Are OBL	., FACW, or FAC	3	(A)
Shrub Stratur	<u>n</u> (Plot size	e: 15Ft)	10	=Total Cover		Total Number Species Acros	of Dominant ss all Strata:	4	(B)
Cornus d	rummondii	·	10	Y	FAC	Demonstrat De			
Herb Stratum	(Plot size	e: 6 Ft)	10	=Total Cover		That Are OBL	, FACW, or FAC:	75.0%	<u>∕</u> (A/B)
Phalaris a	arundinacea	<u> </u>	40	Y	FACW	Prevalence In	ndex Worksheet	:	
Carex fes	tucacea		20	Y	FACW	Total % C	over of:	Multiply by	:
Urtica dio	ica		5	Ν	FACW	OBL species	0	x 1 = 0	
Rumex cr	ispus		2	N	FAC	FACW species	s <u>65</u>	x 2 = 13	0
			67	=Total Cover		FAC species	12	x 3 = 36	;
Vine Stratum	_					FACU specie	s <u>10</u>	x 4 = 40)
						UPL species	0	x 5 = 0	
						Column Totals	s: <u>87</u>	(A) 206	; (B)
						Prevale	nce Index = B/A=	2.37	
						Hydrophytic V	egetation Indica	ators:	
						Rapid Tes	st for Hydrophytic	Vegetation	
						X Dominand	ce Test > 50%	- 9	
						X Prevalenc	$x = \ln dex \le 3.0$		
						Morpholo	gical Adaptations	(Provide su	pporting
						data in Re Problema	emarks or on a se tic Hydrophytic V	egetation (E) Explain)
						Indicators of be present, u	hydric soil and we	etland hydrolo	ogy must
						Hydrophy Vegetation Pr	rtic resent? Yes	X No	
Remarks: (Inclu	de photo numbers l	here or on a separate sheet.)						

The narrow drainage ditch was dominated by emergent hydrophytes with shrubs and trees growing on the side slopes and above the wetland.



Profile Descri	ption: (Desc	cribe to the	depth nee	eded to doo	cument	the indic	cator or o	confirm t	the absence of Indicators.)	
Depth	Color	Matrix (moint)	0/	Color (n	Re noint)	edox Fea	itures	1002	Toyturo	Pomorko
							Type .			Remarks
0 to 18	10YR	3/1	95	7.5YR	4/6	5		M	SANDY LOAM	NA Matrix
Type: C=Cond	centration, D	=Depletion,	RIVI=Reau	ced Martix,	05=00	verea or	Coated	sand Gra	ins. 4Location: PL=Pore Lining,	M=Matrix.
Hydric Soil In	ndicators:								Indicators for Problematic Hy	dric Soils: ³
Histosol (A1)		[Sandy G	leyed Ma	trix (S4)			Coast Prairie Redox (A16)	
Histic Epipe	don (A2)		[Sandy R	edox (S5))			☐ Iron-Manganese Masses (F12)	
Black Histic	(A3)		[Stripped	Matrix (S	6)			Dark Surface (S7)	
Hydrogen S	ulfide (A4)		[Loamy M	lucky Min	eral (F1)				10)
Stratified La	ayers (A5)		[Loamy G	ileyed Ma	trix (F2)				12)
2 cm Muck	(A10)		[Depleted	Matrix (F	-3)			Uther (Explain in Remarks)	
Depleted Be	elow Dark Surf	ace (A11)	[Redox D	ark Surfa	ce (F6)				
Thick Dark	Surface (A12)		[Depleted	Dark Su	rface (F7)			3	
Sandy Muck	ky Mineral (S1))	[Redox D	epressior	ns (F8)			 Indicators of hydrophytic vegeta wetland hydrology must be prese 	ation and ent. unless
5 cm Mucky	Peat or Peat	(S3)							disturbed or problematio	2.
Bestricti	ve I aver (i	f observed	D:							
Type:	•• _ uje. (.		.,.							
Depth (inch	es):								Hydric Soil Present? Y	es X No
Remarks:										
The observed s	oil profile mee	ts hydric soil c	riteria.							
HYDROLOG	Y									
Wetland Hyd	rology Indi	cators:								
Primary Indica	ators (minimu	um of one is	required;	check all th	at apply)			Secondary Indicators (mini	num of two required)
Surface Wa	ter (A1)			Wate	r-Stained	Leaves (I	B9)		Surface Soil Cracks	(B6)
High Water	Table (A2)			Aqua	tic Fauna	(B13)			Drainage Patterns (E	310)
Saturation (A3)				Aquatic F	Plants (B14	4)		Dry-Season Water 1	able (C2)
Water Mark	s (B1)				ogen Sulf	ide Odor (C1)	D ((Crayfish Burrows (C	8) Acricl Imag (CO)
Sediment D	eposits (B2)				zed Rhizo	ospneres a	along Livin	ig Roots (C		
	IS (B3)				ence of R	eaucea ira	on (C4) Disward C			
	to (PE)						i Plowed a		Geomorphic Position	r (D2)
	is (DJ) Visible on Asri	ol Imagany (P7	7)						▼ FAC-Neutral Test (L	5)
	aetated Conc	ar intagery (D7 ave Surf (B8))		r (Evolain	in Remar	') 'ke)			
						mittema	1(3)			
Field Observa	ations:									
Surface Wate	r Present?	Yes	N	o <u>X</u>	Depth (inches):				
Water Table F	Present?	Yes	N	0 <u>X</u>	Depth (inches):		0	Wetland Hydrology Present?	Yes X No
Saturation Pre		res	<u> </u>	0 <u> </u>	Depth (inches):		0	ficialia il julicitegy i loconti	
Describe Record	led Data (strea	am gauge, moi	nitoring wel	l, aerial photo	os, previo	us inspect	tions), if av	/ailable:		
Remarks:										
The area displa	yed indicators	of wetland hy	drology.							

State Lyman-Richey Corporation State M.E Sampling Point: S.27 Investigators: Ben Fisher Austin Zigler Section, Township, Range S.9 T 13N R 10E andtorm (hildispect transe, etc.): Terrace Coal Relief (concese, convex, none): None Signe(%): 0 Lat: 41.1034453970473 Long: 96.3107520162537 Datum: None Signe(%): 0 Lat: 41.1034453970473 Long: 96.3107520162537 Datum: None None view legitation , Soil Hydrology , significantly disturbed? Xe No (If Ne, captain in Remarks) SUMMARY OF FINDIGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrolydiv Vegetation Present? Yes No X Hydrologiv Vegetation Present? Yes No X No X Wetland Hydrology Present? Yes No X No X Hydrologiv Vegetation Present? Yes No X X No Morus full Yes <th>Project/Site: Gre</th> <th>etna Bottoms</th> <th></th> <th></th> <th>City/Count</th> <th>ty:</th> <th>Sarpy Cour</th> <th>nty</th> <th>Sampling Date</th> <th>e: 4/30/</th> <th>/2015</th> <th></th>	Project/Site: Gre	etna Bottoms			City/Count	ty:	Sarpy Cour	nty	Sampling Date	e: 4/30/	/2015	
Investigators: Ben Fisher Austin Zigler Section, Township, Range S.9 T 13N R 10E andform (hildsope, terrace, etc.): Terrace Local Relief (conceve, convex, none): None Sold Map Unit Name: Gibbon loarny fine sand, overwash, accasionally flooded NWI Classification: None we dimate/ / hydrologic conditions on the site typical for this time of year? Yes No (If No, explain in Remarks) we Vegetation , Soil , Hydrology , significantry disturbed? Are "Normal Circumstances" present? Yes No SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrology Present? Yes No X Hydrology Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Is the Sampled Area within a Wetland? No X <td>Applicant/Owner:</td> <td>Lyman-Riche</td> <td>y Corporation</td> <td></td> <td></td> <td></td> <td>State</td> <td>: NE</td> <td>Sampling Poir</td> <td>nt: S-2</td> <td>7</td> <td></td>	Applicant/Owner:	Lyman-Riche	y Corporation				State	: NE	Sampling Poir	nt: S-2	7	
and/form (hills/pe, terrace, etc.): Terrace Local Relief (concreve, convex, none): None Silvap(%): 0 Lat: 11034453970473 Long: 96.3107520122537 Datum: NAD 1983 Silvap(%): 0 Lat: 411034453970473 Long: 96.3107520122537 Datum: NAD 1983 Ver Vegetation , Soil Hydrology agmittenity disturbed? Are Normationse? Inserts? X No Ver Vegetation , Soil Hydrology naturally problematic? (if needed, explain any answers in Remarks.) SUMMARY OF FINDINCS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrology Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X Vescentrice No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Vetland Hydrology. Is the Sampled Area within a Wetland? Yes No X Is the Sampled Area withydrology. Is the Sampled Area within a W	Investigators: B	Ben Fisher		Austin Zig	er		Section, Tov	vnship, Range	S 9 T 1	3N	R 10E	
silope(%): 0 Lat: 41.1034453970473 Long: -96.3107520162537 Datu:: NAD 1983 Sold Map Duit Name: Gibbon loamy fine sand, overwash, occasionally flooded NWI Classification: None we vegetation	Landform (hillslope,	terrace, etc.):	Terrace				Local Rel	ief (concave, co	onvex, none):	None		
Soil Map Unit Name: Gibbon loamy fine sand, overwash, occasionally flooded NWI Classification: None ve climatic / hydrology conditions on the site typical for this time of year? Yes X No (II No. equalin in Remarks) ve Vogetation _, Soil _, Hydrology _, aignificantly disturbed? Are "Normal Circumstances" present? Yes	Slope(%): 0	Lat:	41.103445397	70473	Long:	96.31075201	62537	Datum:	NAD 1983			
Vere climatic / hydrologic conditions on the sile typical for this time of year? Yes X No (If No, explain in Remarks.) Vere Vegetation , Soil , Hydrology , significantly disturbed? Are "Normal Circumstances" (res _ X _ No	Soil Map Unit Name	: Gibbon loa	amy fine sand, o	overwash, o	ccasionally floo	oded		NWI Classificat	tion: None			
vre Vegetation	Are climatic / hydrolo	ogic conditions	on the site typic	al for this tin	ne of year?	Yes X	No	(If No, expla	ain in Remarks	s)		
vre Vegetation	Are Vegetation	, Soil,	Hydrology	_, significa	ntly disturbed?	A	Are "Normal	Circumstances"	present?	Yes>	K No	
SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No X Hydrophytic Vegetation Present? Yes No X Wetland Hydrology Present? Yes No X Vestand Hydrology Present? Yes No X Wetland Hydrology Present? Yes No X Remarks: The area characterized by this data form is an upland area adjacent to the wetland characterized in S-26. The area failed to display indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. VEGETATION- Use scientific names of plants. Absolute % Cover Dominant Species Indicator Tree Stratum (Plot size: 30 Ft) 20 Y FACU Total Area BL, FACW, or FAC: 1 (A) Morus rubra 20 Y FAC Total Area BL, FACW, or FAC: 1 (A) Brows inermis 100 Y FAC FACU Fac Metro Stratum (Plot size: 6 Ft) 100 = Total Cover Total % Cover of: Multiply by: OBL species 10 = Total Cover Total % Cover of	Are Vegetation	, Soil,	Hydrology	, naturally	problematic?		(If needed,	explain any ans	wers in Rema	arks.)		
Hydrophytic Vegetation Present? Yes No X Hydrophytic Vegetation Present? Yes No X Wetland Hydrology Present? Yes No X The area characterized by this data form is an upland area adjacent to the wetland characterized in S-26. The area failed to display indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. Dominance Test Worksheet: The area characterized by this data form is an upland area adjacent to the wetland characterized in S-26. The area failed to display indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. Dominance Test Worksheet: The Stratum (Plot size: 30 Ft.) 0 Y FACU Total Number of Dominant Species and the common of the area of the area of the common of the common of the common of the area of the common of the comm	SUMMARY OF		- Attach a si	ite map s	howing sar	nplina poi	nt locatio	ns. transec	ts. importa	int feat	ures. et	c.
Hydric Soil Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Wetland Hydrology Present? Yes No X within a Wetland? Yes No X Xemarks: The area characterized by this data form is an upland area adjacent to the wetland characterized in S-26. The area failed to display indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. Dominante Test Worksheet: Number of Dominant Species The Stratum (Plot size: 30 Ft _) 20 Y FACU Total Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Shrub Stratum (Plot size: 15Ft _) 10 Y FACU FACU Percent of Dominant Species 3.3% (A/B) Herb Stratum (Plot size: 6 Ft _) 100 strotal Cover Total % Cover of: Multiply by: 0 X = 0 FACU FACU Total % Cover of: Multiply by: 0 X = 0 FACU FACU Species 0 x 1 = 0 FACU Species 0 x 2 = 0 FACU Species 0 x 3 = 30 0 FACU Species 0 x 4 = 480 0 FACU Species 0 x 5 = 0 Cclunn Tota	Hydrophytic Veget	ation Present?	Yes	No X								
Wetland Hydrology Present? Yes No X Remarks: The area characterized by this data form is an upland area adjacent to the wetland characterized in S-26. The area failed to display indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. VEGETATION – Use scientific names of plants. Absolute % Cover Dominance Test Worksheet: Number of Dominant Species Tree Stratum (Plot size: 30 Ft _) 20 Y FACU FACU Morus rubra 20 Y FACU Total Number of Dominant Species 3 Shrub Stratum (Plot size: 15Ft _) 10 Y FACU FACU Percent of Dominant Species 3 3.% (A)B) Herb Stratum (Plot size: 6 Ft _) 100 Y FACU FACU Total Nomber of Dominant Species 3 3.% (A)B) Vine Stratum (Plot size: 6 Ft _) 100 Y FACU FACU Total Nomber of Dominant Species 3 3.% (A)B) Vine Stratum (Plot size: 6 Ft _) 100 Y FACU Total Cover Total Cover Total % Cover of: Multiply by: OB Column Totals: 100 X 1 = 0 Column Totals:	Hydric Soil Presen	nt?	Yes	No X	Is the Sa within a	ampled Area		N	N	v		
Remarks:	Wetland Hydrology	y Present?	Yes	No X	within a	wettand:		Yes	NO	<u>X</u>		
The area characterized by this data form is an upland area adjacent to the wetland characterized in S-26. The area failed to display indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. VEGETATION- Use scientific names of plants. Absolute %Cover Dominant Species Indicator Status Tree Stratum (Plot size: 30 Ft_) 20 Y FACU That Are OBL, FACW, or FAC: 1 (A) Morus rubra 20 Y FACU Total Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A) Shrub Stratum (Plot size: 15Ft_) 0 Y FACU Percent of Dominant Species 33.3% (A/B) Herb Stratum (Plot size: 6 Ft_) 100 Y FACU Total % Cover of: Multiply by: 0 Sa.3.3% (A/B) Vine Stratum	Remarks:											
VEGETATION_ Use scientific names of plants. Absolute % Cover Dominant Status Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 Morus rubra 20 Y FACU Total Number of Dominant Total Number of Dominant Shrub Stratum 0 Y FACU Shrub Stratum (Plot size: 15Ft)) 0 Y FAC Morus rubra 10 Y FAC Percent of Dominant Species Across all Strata: 3 (B) Herb Stratum (Plot size: 6 Ft)) 100 Y FAC Percent of Dominant Species 100 33.3% (A/B) Vine Stratum (Plot size: 6 Ft)) 100 Y FACU FACU Vine Stratum (Plot size: 0 Ft)) 100 Y FACU Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 5 = 0 0 Courd within totals: 130 (A) 510 (B) Vine Stratum Vine Stratum 130 (A) 510 (B) FACU <t< td=""><td>The area character</td><td>ized by this data</td><td>a form is an upla</td><td>and area adj</td><td>acent to the we</td><td>etland charact</td><td>erized in S-2</td><td>26. The area fail</td><td>ed to display i</td><td>ndicators</td><td>s of</td><td></td></t<>	The area character	ized by this data	a form is an upla	and area adj	acent to the we	etland charact	erized in S-2	26. The area fail	ed to display i	ndicators	s of	
VEGETATION – Use scientific names of plants. Absolute ½ Cover Dominant Species Indicator Status Tree Stratum (Plot size: <u>30 Ft</u>)	nydropnytie vegeta	tion, nyane sone		iyurology.								
VECETATION Use Scientific names of plants. X Cover Species Status Dominance Test Worksheet: Iree Stratum (Plot size: 30 Ft _)		11	· · · · · · · · · · · · · · · · · · ·		Absolute	Dominant	Indicator					
Tree Stratum (Plot size: 30 Ft) Morus rubra 20 Y FACU 20 Y FACU 20 Y FACU 20 Total Number of Dominant Species 1 Corrus drummondii 10 Y FAC 10 Y FAC Bronus inermis 10 Y FACU 100 Y FACU 100 Y FACU 100 Y FACU Bronus inermis 100 Y 100 Y FACU 100 Total Cover Multiply by: OBL species 0 X1 = 0 FACU species 10 X3 = 30 FACU species 120 X4 = 480 UPL species 0 X5 = 0 Column Totals: 130 (A) 510 Prevale	VEGETATION-	- Use scienti	ific names of	plants.	% Cover	Species	Status	Dominance ⁻	Test Workshe	eet:		
Morus rubra20YFACUThat Are OBL, FACW, or FAC:I(A)Shrub Stratum Conus drummondii10YFACTotal Number of Dominant Species Across all Strata:3(B)Conus drummondii10YFACPercent of Dominant Species That Are OBL, FACW, or FAC:33.3%(A/B)Herb Stratum Disromus inermis100YFACUPercent of Dominant Species That Are OBL, FACW, or FAC:33.3%(A/B)Vine Stratum Vine Stratum100YFACUFACUTotal % Cover of: Total % Cover of:Multiply by: Nultiply by: NIL Are OBL, FACW, or FAC:33.3%(A/B)Vine Stratum100YFACUFACUTotal % Cover of: Total % Cover of:Multiply by: Nultiply by: NIL Are OBL, FACW, or FAC:30.8%(A/B)Vine Stratum100YFACUFACUTotal % Cover of: NIL Are OBL, FACW, or FAC:Multiply by: NIL Are OBL, FACW, or FAC:33.3%(A/B)Vine Stratum100YFACUFACUTotal % Cover of: NIL Are OBL, FACW, or FAC:Multiply by: NIL Are OBL, FACW, or FAC:NIL Are OBL, FACW, or FAC:33.3%(A/B)Vine Stratum100YFACUFACUTotal % Cover of: NIL Are OBL, FACW, or FAC:Multiply by: NIL Are OBL, FACW, or FAC:NIL Are OBL, FACW, or FAC:33.3%(A/B)Vine Stratum100YFACUFACUFACUTotal % Cover of: NIL Are OBL, FACW, or FAC:Multiply by: NIL Are OBL, FACW, or FAC:NIL Are OBL, FACW, or F	Tree Stratum	(Plot size	e: <u>30 Ft</u>)				Number of D	ominant Spec	ies	4	(4)
$\frac{20}{=\text{Total Cover}}$ $\frac{10}{10} = \text{Total Cover}$ $\frac{100}{100} = $	Morus rubra				20	Y	FACU	That Are OB	L, FACW, or F	AC:	I	(A)
Shrub Stratum (Plot size: 15Ft) 3 (B) Corrus drummondii 10 Y FAC 10 =Total Cover FAC Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B) Herb Stratum (Plot size: 6 Ft) 100 Y FACU FACU Prevalence Index Worksheet: Vine Stratum 100 Y FACU Total % Cover of: Multiply by: Vine Stratum 100 =Total Cover FACU FACU FACU species 0 x1 = 0 FAC species 10 x3 = 30 FACU species 120 x4 = 480 UPL species 0 x5 = 0 Column Totals: 130 (A) 510 (B) Prevalence Index = B/A = 3.92 9.92 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test > 50% Prevalence Index s 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Problematic Hydrophytic Vegetation (Explain) Problematic Hydrophytic Vegetation (Explain)					20	=Total Cover		Total Numbe	r of Dominant			
Corrus drummondii10YFACHerb Stratum Bromus inermis(Plot size: 6 Ft) 100 YFACU 100 YFACUPercent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)Vine Stratum 100 YFACUPrevalence Index Worksheet:Vine Stratum 100 YFACUTotal % Cover of: OBL speciesMultiply by: $x 1 = 0$ FACW speciesVine Stratum 100 YFACUFACUVine Stratum 100 YFACUVine Stratum 100 YFACUHydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test > 50% Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain)	Shrub Stratum	(Plot size	e: <u>15Ft</u>)				Species Acro	ss all Strata:		3	(B)
Image:	Cornus drum	imondii			10	Y	FAC	Percent of Do	ominant Speci	es	00.00/	
Herb Stratum (Plot size: 6 Ft)) Bromus inermis 100 Y FACU Vine Stratum 100 =Total Cover Total % Cover of: Multiply by: Vine Stratum 00 =Total Cover Total % Cover of: Multiply by: Vine Stratum 0 =Total Cover 0 x 1 = 0 FACU FACU FACU FACU species 0 x 2 = 0 FACU species 10 x 3 = 30 FACU species 10 x 4 = 480 UPL species 0 x 5 = 0 Column Totals: 130 (A) 510 (B) Prevalence Index = B/A= 3.92 3.92 1 100 Dominance Test > 50% Prevalence Index = 3.0 100 0					10	_=Total Cover		That Are OBI	_, FACW, or F	AC:	33.3%	_(A/B)
Browus inermis100YFACUFACUTotal % Cover of:Multiply by:100 $=Total Cover$ $OBL species$ 0 $x 1 = 0$ $OBL species$ 0 $x 2 = 0$ FACW species10 $x 3 = 30$ FACU species120 $x 4 = 480$ UPL species0 $x 5 = 0$ Column Totals:130(A)510 $DPrevalence Index = B/A = 3.92$ Hydrophytic Vegetation Indicators:Rapid Test for Hydrophytic VegetationDominance Test > 50%Prevalence Index ≤ 3.0Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)Problematic Hydrophytic Vegetation (Explain)	Herb Stratum	(Plot size	e: <u>6 Ft</u>)				Prevalence I	ndex Worksh	neet:		
Vine StratumItem is constructionItem is provided in the pro	Bromus inerr	nis			100	Y	FACU	Total % (Cover of	M	ultiply by:	
Vine StratumGuild pointFACW species 0 $x 2 = 0$ FAC species 10 $x 3 = 30$ FACU species 120 $x 4 = 480$ UPL species 0 $x 5 = 0$ Column Totals: 130 (A) 510 <i>Prevalence Index = B/A=</i> 3.92 Hydrophytic Vegetation Indicators:Rapid Test for Hydrophytic VegetationDominance Test > 50%Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)Problematic Hydrophytic Vegetation (Explain)					100	_=Total Cover			0	— <u>x</u> 1	= 0	
FAC species10 $x \ 3 = 30$ FACU species120 $x \ 4 = 480$ UPL species0 $x \ 5 = 0$ Column Totals:130(A)510Prevalence Index = B/A=3.92Hydrophytic Vegetation Indicators:Rapid Test for Hydrophytic VegetationDominance Test > 50%Prevalence Index ≤ 3.0Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)Problematic Hydrophytic Vegetation (Explain)	Vine Stratum							FACW specie		x 2	= 0	
FACU species 120 $x 4 = 480$ UPL species 0 $x 5 = 0$ Column Totals: 130 (A) 510 Prevalence Index = $B/A =$ 3.92 Hydrophytic Vegetation Indicators:Rapid Test for Hydrophytic VegetationDominance Test > 50%Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)Problematic Hydrophytic Vegetation (Explain)								FAC species	10	x 3	= 30	
UPL species0 $x 5 = 0$ UPL species0 $x 5 = 0$ Column Totals:130(A)510Prevalence Index = B/A=3.92Hydrophytic Vegetation Indicators:Rapid Test for Hydrophytic VegetationDominance Test > 50%Prevalence Index < 3.0								FACU specie	es 120) x 4	= 480	
Column Totals: 130 (A) 510 (B) Prevalence Index = B/A= 3.92 Hydrophytic Vegetation Indicators:								UPL species	0	x 5	= 0	
Column Totals:									13	 0 (A)	510	(B)
Prevalence Index = B/A= 3.92 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test > 50% Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain)									IS:		2.00	(_)
Hydrophytic Vegetation Indicators:								Prevaie	ence index = E	3/A=	3.92	
Rapid Test for Hydrophytic Vegetation Dominance Test > 50% Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain)								Hydrophytic	Vegetation In	dicators	:2	
Dominance Test > 50% Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain)								Rapid Te	est for Hydroph	nytic Veg	etation	
Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain)								Dominan	ce Test > 50%	6		
Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain)								Prevalen	ce Index ≤ 3.0)		
Problematic Hydrophytic Vegetation (Explain)								Morpholo	ogical Adaptati	ions (Pro	ovide supp	oorting
								Problema	atic Hydrophyt	tic Veget	ation (Exp	plain)
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.								Indicators of be present,	hydric soil an unless disturb	d wetlan ed or pro	d hydrolog blematic.	jy must
Hydrophytic Vegetation Present? Yes No X								Hydroph Vegetation F	ytic Present? Y	es	No 2	x
Remarks: (Include photo numbers here or on a separate sheet.)	Remarks: (Include	photo numbers	here or on a sep	parate sheet	.)			<u> </u>				



Profile Descr	iption: (Des	cribe to the	depth ne	eded to docume	nt the indi	cator or	confirm	the absence of Indicators.)			
Depth (inches)	Colo	r (moist)	%	Color (moist)			Loc 2	Texture	Rem	arks	
	40)/D		100			турс				ans	
0 10 12		4/1	100								
17 10 10 17 10 10			RM-Red	uced Martix CS-0	overed or	Coated	Sand Gra	ains 2 ocation: PL -Pore Lining	M-Matrix		
Hydric Soil I	ndicators	-Dopiotion,	1111-1104			obulou				2	
	1)			Sandy Gleved M	Aatrix (S4)			Indicators for Problematic H	vdric Soils	<u>:</u> '	
	(A2)				25)			Coast Prairie Redox (A16)			
	$\sim (\Lambda 2)$			Stripped Matrix	(S6)			Iron-Manganese Masses (F12)			
					(50)			Dark Surface (S7)			
								Very Shallow Dark Surface (TF	12)		
	ayers (A5)				viatrix (F2)			Other (Explain in Remarks)			
2 cm Muck	(A10)			Depleted Matrix	(F3)						
Depleted B	elow Dark Su	rface (A11)		Redox Dark Su	face (F6)						
Thick Dark	Surface (A12)		Depleted Dark S	Surface (F7))		3 Julia tan at hudan hutin want			
Sandy Muc	ky Mineral (S	1)		Redox Depress	ions (F8)			indicators of hydrophytic vegeta wetland hydrology must be prese	ation and ent, unless		
5 cm Muck	y Peat or Pea	t (S3)						disturbed or problemati	C.		
Restrict	ive Layer (if observe	d):								
Туре:								Hydric Soil Present? Y	es	No	x
Depth (incl	nes):							Tryune contresent:		-	
	117										
Wetland Ur	r I Juology Ind	iaatawa									
Primary Indic	ators (minim	ium of one is	required:	check all that app	lv)			Secondary Indicators (mini	mum of two	requir	ed)
Surface Wa	ter (Δ1)		• •	Water-Stain	ed Leaves (B9)			(B6)	•	
High Water	Table (A2)			Aquatic Fau	na (B13)	20)		Drainage Patterns ((20) 310)		
Saturation	(A3)			True Aquatio	c Plants (B1	4)		Dry-Season Water	able (C2)		
Water Marl	(s (B1)			Hydrogen S	ulfide Odor	, (C1)		Crayfish Burrows (C	8)		
Sediment D	Deposits (B2)			Oxidized Rh	izospheres	along Livii	ng Roots (C3) Saturation Visible or	n Aerial Imag	.(C9)	
Drift Depos	sits (B3)			Presence of	Reduced Ir	on (C4)		Stunted or Stressed	Plants (D1)		
Algal Mat c	or Crust (B4)			Recent Iron	Reduction in	n Plowed	Soils (C6)	Geomorphic Positio	n (D2)		
Iron Depos	its (B5)			Thin Muck S	Surface (C7))		FAC-Neutral Test (E	05)		
Inundation	Visible on Ae	rial Imagery (B	7)	Gauge or W	ell Data (D	9)					
Sparsely V	egetated Con	cave Surf. (B8)	Other (Expla	ain in Rema	rks)					
Field Observ	ations:										
Surface Wate	er Present?	Yes	N	No X Dept	h (inches):			-			
Water Table	Present?	Yes	N	No X Dept	h (inches):				Vee	Na	v
Saturation P	resent?	Yes	N	No <u>X</u> Dept	h (inches):			wetland Hydrology Present?	tes	NO	
Describe Recor	ded Data (stre	am gauge, mo	onitoring we	ell, aerial photos, prev	ious inspec	tions), if a	vailable:				
Remarks:			–								
The area failed	to meet wetla	and hydrology	criteria. The	e area is elevated ab	ove the adja	acent wetla	and.				



Project/Site:	Gretna Bottoms			City/Coun	ty:	Sarpy Cour	nty S	Sampling [Date:	4/30/20	15	
Applicant/Owner	r: Lyman-Ricl	ney Corporation				State	: NE	Sampling	Point:	S-28		
Investigators:	Ben Fisher	A	ustin Ziglei	r	;	Section, Tov	wnship, Range	S 9	T 13N	R [,]	10E	
Landform (hillslo	ope, terrace, etc.)	Depression	n			Local Re	lief (concave, co	nvex, non	e): C	oncave		
Slope(%): 0	La	at: 41.10836506421	103	Long:	-96.310791287	78053	Datum:	NAD 1983				
Soil Map Unit Na	ame: Gibbon-	Wann complex, occa	asionally flo	oded			NWI Classificat	ion: Nor	e			
Are climatic / hvo	drologic condition	s on the site typical f	for this time	of vear?	Yes X	No	(If No. expla	ain in Rem	arks)			
Are Vegetation	Soil	Hydrology	significant	lv disturbed?	Δ	re "Normal	Circumstances"	present?	Yes	х	No	
Are Vegetation	, soil	, Hydrology,	naturally p	oroblematic?		(If pooded			marke	· · · ·		
CIIMMADV		,,,,,	monich	owing cor	malina noi				rtont	.) footuu		
Hydrophytic Ve	OF FINDING	$\frac{5 - \text{AlldCh a She}}{2}$		owing sai	nping poi	It locatio	nis, transect	.s, impo	rtant	Tealui	<u>es, er</u>	
Hydric Soil Pre	esent?			Is the S	ampled Area							
Wetland Hydro	blogy Present?			within a	Wetland?		Yes	No	Х			
Remarks:	etorized by this d	ata form is an unland	t area locat	od in a drain	ago ditch porth	of the wet	and characterize	nd in S 26	Thoo	roa faila	d to dieu	nlav
indicators of hy	drophytic vegetat	ion, hydric soil and w	etland hydi	rology.	age ulteri norti	I OI IIIE WEI		a in 3-20.	ine a		u to uisp	Jiay
VEGETATIC	N Use scier	ntific names of p	lants	Absolute	Dominant_	Indicator						
VEGETATIC			unto.	<u>% Cover</u>	Species	<u>Status</u>	Dominance T	Fest Work	sheet			
Tree Stratum	<u>e</u> (Plot s	ize: <u>30 Ft</u>)					Number of D	ominant S	pecies		2	(A)
Celtis oc	cidentalis			40	Y	FAC	I nat Are OB	L, FACVV,	or FAC			_ (/ ()
Morus ru	ıbra			30	Y	FACU	Total Number	r of Domin	ant			
				70	=Total Cover		Species Acro	ss all Stra	ta:	_	4	(B)
Shrub Stratu	<u>m</u> (Plot s	ize: <u>15Ft</u>)					Percent of Dr	minant Sr	acias			
Cornus o	drummondii			20	Y	FAC	That Are OBL	, FACW, o	or FAC	: _	50.0%	(A/B)
				20	=Total Cover		Drevelance I					
Herb Stratum	<u>n</u> (Plot s	ize: <u>6 Ft</u>)					Prevalence I		ksnee			
Bromus i	inermis			50	Y	FACU		Sover of:	0		oly by:	
Convolvu	ulus arvensis			10	N	FAC	OBL species		10	_ ^ I = _		
Digitaria	sanguinalis				N	FACU	FACW specie	es	10	_ X Z =		
Solidago					N	FACU FACW	FAC species		75	_ X 3 =	225	
Galium a	aparine			5	<u>N</u>	FACU	- FACU specie	es	105	_ x 4 =	420	
Rumex c	rispus			5	N	FAC	UPL species		0	_ x 5 =	0	
				100	=Total Cover		Column Total	s:	190	(A)	665	(B)
Vine Stratum	1						Prevale	ence Index	= B/A	=	3.50	
							Hydrophytic	Vegetatio	n Indic	ators:		
							Ranid Te	st for Hvd	ophyti	c Veget:	ation	
							Napid Fe	co Tost > 1	50%	J Vogou		
							Dominan		20			
									5.0	- (D		
							data in R	emarks or	on a s	eparate	sheet)	oning
							Problema	atic Hydrop	hytic \	/egetatio	on (Exp	plain)
							Indicators of be present, u	hydric soi unless dist	l and w urbed	etland h	iydrolog ematic.	jy must
							Hydroph Vegetation P	ytic resent?	Yes		No 2	x
Remarks: (Inclu	ude photo number	rs here or on a separ	ate sheet.)				<u> </u>					
The area fails to	o meet hydrophyt	ic vegetation criteria.										



Profile Descr	ription: (Describe to	the depth nee	eded to document	the indi	cator or o	confirm t	he absence of Indicators.)	
Depth (inchos)	Color (moist)	0/_	Color (moist)		Type 1	1 00 2	Texture	Pemarks
				70	Турс	100		
0 10 6	10YR 3/1	100		·			SAND	
6 10 14	10YR 4/2	100		·			SAND	
14 10 16	TUTE 3/ 1		and Martix CS-Co	worod or	Controd	Sand Grai	ing 2 ocation: PL -Poro Lining	M-Matrix
Type. C=CO				vereu or	Coaleu	Sanu Gra		
Hydric Soil I	Indicators:						Indicators for Problematic Hy	ydric Soils: ³
Histosol (A	(1)		Sandy Gleyed Mat	trix (S4)			Coast Prairie Redox (A16)	
Histic Epip	edon (A2)	[Sandy Redox (S5)				Iron-Manganese Masses (F12)	
Black Histi	c (A3)	[Stripped Matrix (S	6)			Dark Surface (S7)	
Hydrogen :	Sulfide (A4)	[Loamy Mucky Min	eral (F1)				(12)
Stratified L	ayers (A5)	[Loamy Gleyed Ma	trix (F2)				12)
2 cm Muck	(A10)	[Depleted Matrix (F	3)			Other (Explain in Remarks)	
Depleted E	Below Dark Surface (A11) [Redox Dark Surfa	ce (F6)				
Thick Dark	Surface (A12)	[Depleted Dark Sur	rface (F7)				
Sandy Mud	cky Mineral (S1)		Redox Depression	is (F8)			³ Indicators of hydrophytic vegeta	ation and
5 cm Muck	y Peat or Peat (S3)	·					disturbed or problematio	c.
Restrict	ive Laver (if obse	rved):						
Type:	2	,						
Depth (incl	hes):						Hydric Soil Present? Yo	es No X
Remarks:								
The observed	soil profile failed to displ	ay indicators of I	hydric soil.					
HYDROLOG	θY							
Wetland Hy	drology Indicators:							
Primary Indic	cators (minimum of or	e is required;	check all that apply))			Secondary Indicators (minin	mum of two required)
Surface W	ater (A1)		Water-Stained	Leaves (B9)		Surface Soil Cracks	(B6)
High Wate	r Table (A2)		Aquatic Fauna	(B13)			Drainage Patterns (E	310)
Saturation	(A3)		True Aquatic P	Plants (B1	4)		Dry-Season Water T	able (C2)
Water Mar	ks (B1)		Hydrogen Sulfi	de Odor ((C1)		Crayfish Burrows (C	8)
Sediment I	Deposits (B2)			spheres a	along Livin	g Roots (C	(3) Saturation Visible or	Aeriai Imag.(C9)
	SITS (B3)			eaucea Ire	on (C4) • Diswad C			
	bi Clusi (B4)			face (C7)	i Flowed a			n (D2)
	Visible on Aerial Imager	v (B7)			a)			(0)
Sparsely V	/egetated Concave Surf.	(B8)	Other (Explain	in Remai	/) rks)			
Field Observ	vations:	(-/			-,			
Surface Wat	er Present?	Yes N	o X Depth (i	inches):				
Water Table	Present?	Yes N	o X Depth (inches):				
Saturation P	resent?	Yes N	o X Depth (inches):			Wetland Hydrology Present?	Yes No_X_
Describe Recor	ded Data (stream gauge	e. monitorina wel	I. aerial photos, previo	us inspec	tions), if a	/ailable:		
		,	,,					
.								
Remarks: The area failed	d to meet wetland hydrol	ogv criteria						
		J,						

Project/Site:	Gretna Bottoms		City/Cour	nty:	Sarpy Cour	nty	Sam	oling Date:	4/30/20)15	
Applicant/Owner	Lyman-Riche	y Corporation			State	: NE	Sam	pling Point:	S-29		
Investigators:	Ben Fisher	Aust	tin Zigler		Section, Tov	wnship, Range	e S9	T 13N	R	10E	
Landform (hillslo	pe, terrace, etc.):	Depression			Local Re	lief (concave,	convex	, none): Co	oncave		
Slope(%): 0	Lat:	41.1104847846526	Long:	-96.3106605	88168	Datum:	NAD	1983			
Soil Map Unit Na	me: Gibbon lo	amy fine sand, overwa	ash, occasionally flo	oded		NWI Classific	cation:	None			
Are climatic / hyc	Irologic conditions	on the site typical for	this time of year?	Yes X	No	(If No, ex	plain in	Remarks)			
Are Vegetation	, Soil,	Hydrology, sig	gnificantly disturbed	?	Are "Normal	Circumstance	es" pres	sent? Yes	Х	No	
Are Vegetation	, Soil,	Hydrology, na	aturally problematic?		(If needed.	explain any a	answers	in Remarks	.)		
SUMMARY		- Attach a site m	an showing sa	mpling po	int locatio	ne trance	octe i	mnortant	foatu	ras at	C
Hvdrophytic Ve	aetation Present?	Yes X No	ap showing sa	inping po		113, transc		mportant	Icalu	105, 00	<u>.</u>
Hydric Soil Pre	sent?	Yes X No	Is the S	Sampled Area	а						
Wetland Hydro	logy Present?	Yes X No	within	a Wetland?		Yes	X	No	_		
Remarks:											
The area charac displayed indica	cterized by this data tors of hydrophytic	a form is a scrub-shru vegetation, hydric so	b wetland located in ils, and wetland hyd	a drainage d rology.	itch north of t	he upland cha	aracteri	zed by S-28	and S-3	30. The a	area
VEGETATIO	N – Use scient	ific names of plan	its. <u>Absolute</u> <u>% Cover</u>	Species	Status	Dominanc	e Test	Worksheet:			
Tree Stratum						Number of	f Domir	ant Species			(
Shrub Stratur	<u>n</u> (Plot siz	e: 15Ft)				That Are C	OBL, FA	CW, or FAC	:	3	_ (A)
Salix nigr	a	<u></u> ,	40	Y	OBL	Total Numb	ber of D	Dominant			
Populus	deltoides		30	Y	FAC	Species Ac	cross a	I Strata:		3	(B)
Acer sace	charinum		10	N	FACW	Percent of	Domin	ant Species			
Herb Stratum	(Plot siz	e:6Ft)	80	=Total Cove	Pr	That Are O	BL, FA	CW, or FAC		100.0%	_(A/B)
Phalaris a	arundinacea	<u></u> ,	40	Y	FACW	Prevalence	e Index	Worksheet	::		
Rumex ci	rispus		10	N	FAC	Total %	% Cove	r of:	Multi	iply by:	
Solidago	gigantea		10	Ν	FACW	OBL specie	es	40	x 1 =	40	
			60	=Total Cove	er	FACW spe	ecies	60	x 2 =	120	
Vine Stratum	_					FAC specie	es	40	x 3 =	120	
						FACU spe	ecies	0	x 4 =	0	
						UPL specie	es	0	x 5 =	0	
						Column To	otals:	140	(A)	280	(B)
						Preva	alence	Index = B/A=	=	2.00	
						Uvdrophyti	io Vogo	tation India	otoroi		
						Bonid	Toot fo	r Uvdrophyti		otion	
									veget	alion	
								est > 50%			
						Preval	ence in	$dex \leq 3.0$	(D		
						data in Proble	ologica I Rema matic H	rks or on a s lydrophytic \	s (Prov eparate /egetati	sheet) on (Exp	orting plain)
						Indicators be presen	of hydi it, unles	ric soil and w	etland I or probl	hydrolog ematic.	y must
						Hydrop Vegetation	phytic n Prese	nt? Yes	x	No	
Remarks: (Inclu The area displa	de photo numbers yed dominant hydr	here or on a separate ophytic vegetation.	sheet.)								



Profile Descri	iption: (Des	cribe to the	depth nee	eded to documen	t the indi	cator or	confirm	the absend	ce of Indicators.)	
Depth		Matrix		F	Redox Fea	atures				
(inches)	Color	(moist)	%	Color (moist)	%	Type 1	Loc ²		Texture	Remarks
0 to 4	10YR	3/2	100					SAND		
4 to 18	10YR	5/1	90	7.5YR 4/6	10	С	Μ	SAND		
¹ Type: C=Con	centration, D	=Depletion,	RM=Redu	iced Martix, CS=C	overed or	Coated S	Sand Gra	iins. 2	Location: PL=Pore Linin	g, M=Matrix.
Hydric Soil I Histosol (A' Histic Epipe Black Histic Hydrogen S Stratified La 2 cm Muck Depleted B Thick Dark Sandy Muc 5 cm Mucks Restriction Type: Depth (inch Remarks:	ndicators: 1) edon (A2) c (A3) Sulfide (A4) ayers (A5) (A10) elow Dark Sur Surface (A12) ky Mineral (S1 y Peat or Peat ive Layer (face (A11)) (S3) if observed	d):	 Sandy Gleyed M Sandy Redox (S Stripped Matrix (Loamy Mucky M Loamy Gleyed N Depleted Matrix Redox Dark Surf Depleted Dark S Redox Depression 	atrix (S4) 5) S6) ineral (F1) fatrix (F2) (F3) face (F6) urface (F7) pons (F8)			Indic Indic	eators for Problematic Coast Prairie Redox (A16) Iron-Manganese Masses (F Dark Surface (S7) Very Shallow Dark Surface (Other (Explain in Remarks) ndicators of hydrophytic veg etland hydrology must be pro- disturbed or problem	Hydric Soils: ³ I2) TF12) etation and esent, unless atic. Yes X No
Wetland Hyd Primary Indic Surface Wa High Water Saturation (Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi Inundation Sparsely Va Field Observ Surface Wate	Irology Indi ators (minim ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (A3) (A3) (A3	icators: um of one is ial Imagery (B cave Surf. (B8)	required; 7)	check all that appl U Water-Staine Aquatic Faur True Aquatic Hydrogen Su Oxidized Rhi Presence of Recent Iron F Thin Muck S Gauge or We Other (Expla	y) ed Leaves (na (B13) Plants (B1- lifide Odor (zospheres a Reduced In Reduced In Reduction ir urface (C7) ell Data (D9 in in Reman	B9) (C1) along Livir on (C4) n Plowed S	ig Roots ((Soils (C6)	 C3)	Secondary Indicators (m Surface Soil Crac Drainage Patterns Dry-Season Wate Crayfish Burrows Saturation Visible Stunted or Stress Geomorphic Posi FAC-Neutral Test	nimum of two required) ks (B6) s (B10) r Table (C2) (C8) on Aerial Imag.(C9) ed Plants (D1) tion (D2) (D5)
Water Table Saturation Pr Describe Record	Present? esent? ded Data (stre	Yes Yes am gauge, mo	X N	o <u>X</u> Depth o <u>Depth</u> I, aerial photos, prev	(inches): (inches): ious inspec	tions), if a	4 vailable:	Wetla	and Hydrology Present	? Yes <u>X</u> No
Remarks: The area displa	ayed indicators	s of wetland hy	ydrology.							

Project/Site:	Gretna Bottoms		City/Coun	ty:	Sarpy Cour	nty	Sampling D	ate:	4/30/20	15	
Applicant/Owne	r: Lyman-Riche	ey Corporation			State	: NE	Sampling F	oint:	S-30		
Investigators:	Ben Fisher	Austin Zi	gler		Section, Tov	wnship, Range	S 9 1	۲ 13N	R ′	10E	
Landform (hillslo	ope, terrace, etc.):	Depression			Local Re	lief (concave, co	nvex, none	e): C	oncave		
Slope(%): 0	Lat:	41.1103729270143	Long:	-96.31079339	00882	Datum:	NAD 1983				
Soil Map Unit Na	ame: Gibbon lo	amy fine sand, overwash, o	occasionally floo	oded		NWI Classificat	tion: None	ә			
Are climatic / hy	drologic conditions	on the site typical for this ti	me of year?	Yes X	No	(If No, expla	ain in Rema	arks)			
Are Vegetation	, Soil,	, Hydrology, signific	antly disturbed?	<u>م</u>	Are "Normal	Circumstances"	present?	Yes	Х	No	
Are Vegetation	, Soil,	, Hydrology, natural	ly problematic?		(If needed	explain any ans	wers in Re	marks	;)		
		- Attach a site man	showing co	mpling poi	nt locatio	ne trancad		tant	footuu		10
Hydrophytic V	egetation Present?	Yes No X	silowing sai	inping poi		115, transect	<u>is, impoi</u>	lani	Teatur	<u>cs, ci</u>	
Hydric Soil Pre	esent?		Is the S	ampled Area							
Wetland Hydro	ology Present?		_ within a	a Wetland?		Yes	No	Х	_		
Pomorko:			-								
The area chara display indicato	acterized by this dat ors of hydrophytic ve	a form is an upland area lo egetation and wetland hydr	cated in a drain ology; however,	age-way adjac , the area met	cent to the w	vetland characte riteria.	rized in S-2	:9. The	e area fa	iled to	
						1					
VEGETATIO	DN – Use scient	ific names of plants.	<u>Absolute</u> <u>% Cover</u>	Dominant Species	Indicator Status	Dominance -	Test Works	sheet:			
Tree Stratum	<u>n</u> (Plot siz	e: <u>30 Ft</u>)				Number of D	ominant Sp	ecies		4	(A)
Acer sad	ccharinum		50	Y	FACW	That Are OB	L, FACW, c	or FAC	:		_ (A)
Morus ru	ubra		20	Y	FACU	Total Numbe	r of Domina	ant			
			70	_=Total Cover		Species Acro	ss all Strat	a:		3	(B)
Shrub Stratu	<u>m</u>					Percent of Do	ominant Sp	ecies			(
Herb Stratun	≏ (Plot siz	e: 6 Ft)				That Are OBL	_, FACW, o	r FAC	: —	33.3%	_(A/B)
Bromus	inermis		90	Y	FACU	Prevalence I	ndex Work	shee	·-		
Rumer			5	N	FACW	Total % (Cover of:		 Multi	nlv hv:	
Kumox (515905		100	-Total Cover	1710			0	$\frac{1}{x 1} =$	0	
Vine Stratum	ı					FACW specie	29	55	x 2 =	110	
						FAC species		5	x 3 =	15	
						FACLL specie	<u> </u>	10	x 4 =	440	
								0	x 5 =	0	
								170	(Δ)	565	(B)
						Column Tota	IS:			000	
						Prevale	ence Index	= B/A=	=	3.32	
						Hydrophytic	Vegetation	Indic	ators:		
						Rapid Te	est for Hydro	ophyti	c Vegeta	ation	
						Dominan	ce Test > 5	0%			
						Prevalen	ce Index ≤	3.0			
						Morpholo	ogical Adap	tation	s (Provi	de supp	oorting
						Problema	atic Hvdrop	bn a s hvtic ۱	eparate /egetatio	on (Ex	plain)
						Indicators of	hydric soil	and w	etland h	iydrolog	jy must
						Hydroph	ytic				
Demonstra (L. 1	ula alasta ar 1	hann an an a saon 1 1	- + >			Vegetation P	resent?	Yes		No	X
The area fails t	o meet hydrophytic	vegetation criteria.	əl.)								



Profile Descr	iption: (Des	cribe to the	depth nee	eded to document	the indi	cator or	confirm t	he absence of Indicators.)	
Depth		Matrix		R	edox Fea	atures			
(inches)	Color	(moist)	%	Color (moist)	%	Type 1	Loc ²	Texture	Remarks
0 to 6	10YR	3/2	100					SAND	
6 to 16	10YR	4/2	98	7.5YR 4/6	2	С	М	SAND	
16 to 18	10YR	4/2	70					SAND	
16 to 18	10YR	4/2	30					COARSE SAND	Pebbles
¹ Type: C=Cor	centration, D	D=Depletion	RM=Redu	ced Martix, CS=Co	overed or	Coated S	Sand Grai	ns. ² Location: PL=Pore Li	ning, M=Matrix.
Hydric Soil I	indicators:		Г					Indicators for Problemat	ic Hydric Soils: ³
Histosol (A	1)		l	Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A16	δ)
Histic Epip	edon (A2)			Sandy Redox (S5	5)			Iron-Manganese Masses	(F12)
Black Histi	c (A3)			Stripped Matrix (S	56)			Dark Surface (S7)	
Hydrogen S	Sulfide (A4)		[Loamy Mucky Mir	neral (F1)				oo (TE12)
Stratified L	ayers (A5)		[Loamy Gleyed Ma	atrix (F2)				
2 cm Muck	(A10)		[Depleted Matrix (F3)			Other (Explain in Remark	is)
Depleted B	elow Dark Sur	face (A11)	[Redox Dark Surfa	ace (F6)				
Thick Dark	Surface (A12)	1	[Depleted Dark Su	urface (F7))		0	
Sandy Muc	ky Mineral (S1)	[Redox Depressio	ns (F8)			³ Indicators of hydrophytic	vegetation and
5 cm Muck	y Peat or Peat	(S3)	_	_				disturbed or probl	ematic.
Restrict	ive Layer (if observe	d):						
Туре:									
Depth (incl	nes):							Hydric Soil Present?	Yes X No
HYDROLOG Wetland Hyd	Y drology Indi	icators:							
Primary Indic	ators (minim	um of one is	s required; (check all that apply	/)			Secondary Indicators	(minimum of two required)
Surface Wa	ater (A1)			Water-Staine	d Leaves ((B9)		Surface Soil C	racks (B6)
High Wate	r Table (A2)			Aquatic Fauna	a (B13)			Drainage Patte	erns (B10)
Saturation	(A3)			True Aquatic	Plants (B1	4)		Dry-Season W	ater Table (C2)
U Water Mar	ks (B1)			Hydrogen Sul	fide Odor	(C1)	D . (0	Crayfish Burro	ws (C8)
Sediment [Deposits (B2)				ospheres	along Livir	ig Roots (C	(3) Saturation Vis	ble on Aerial Imag.(C9)
	sits (B3)				Reduced Ir	ron (C4)		Stunted or Str	essed Plants (D1)
	or Crust (B4)				reduction i	n Plowed :	5011S (C6)	Geomorphic P	Osition (D2)
	Visible on Acr	ial Imageny (E	(7)		III Data (Di	/ 9)			ESI (D3)
Sparsely V	egetated Cond	ave Surf. (B8))	Other (Explain	n in Rema	s) Irks)			
Field Observ	ations:		,						
Surface Wat	er Present?	Yes	N	n X Denth	(inches):				
Water Table	Present?	Yes	No	o X Depth	(inches):				
Saturation P	resent?	Yes	No	o X Depth	(inches):			Wetland Hydrology Prese	nt? Yes No_X_
Describe Recor	ded Data (stre	am gauge, m	onitoring well	l, aerial photos, previo	ous inspec	ctions), if a	vailable:		_
Remarks:									
The area failed	d to meet wetla	ind hydrology	criteria.						

Applicant/Owner: Lyman-Richey Corporation State: NE Sampling Policy Sail Investigators: Ben Fisher Austin Zigler Section: Township, Range S 9 T 113 R 10E Landorn Millitogy: Lat: 411105533108641 Long: 95.309542800801 Datum:: NUX Classification:: None Are Vagetation	Project/Site:	Gretna Bottoms			City/Coun	ty:	Sarpy Cour	nty	Samp	oling Date:	4/30/2	015	
Investigator: Ben Fisher Austin Zigler Section, Township, Range S B R 10E Landform (hillslope, terrace, etc.): Depression Local Reliaf (concave, convex, none): Concave Soli Map Unit Name: Globon loarny tine sand, overwash, occasionally flooded MVI Classification: NAD 1983 Soli Map Unit Name:	Applicant/Owner:	Lyman-Riche	y Corporation				State	: NE	Sam	pling Point:	S-31		
Landtorm (hillsbep, terrace, etc.):	Investigators:	Ben Fisher		Austin Zigler	r		Section, Tov	wnship, Rang	e S9	T 13N	R	10E	
Stope(%): 0 Lat: 41.1105533180641 Long: -06.3055482680981 Datum: NAD 1983 Solit Mame Cabbon learny time sand, exervate, occasionaly flooded NW1 Classification: Mone Mone Are Vegetation	Landform (hillslop	oe, terrace, etc.):	Depress	ion			Local Re	lief (concave,	convex	, none): C	oncave		
Soil Map Unit Name: Gibbon loamy fine sand, overwash, occasionally flooded NVII Classification: None Are climatic / hydrologic conditions on the site typical for this time dyear? Yes X No (If No, explain in Remarks). Are vogetation , Soil - Hydrology: , significantly dividued? Are 'Normal Circumstances' present? Yes X No SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No Hydrophytic 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 is an emergent wetland located in a drainage dirth east of S-29. The area displayed indicators of hydrophytic vegetation in the data from same and emarks in the area (DE, FACW, or FAC: Total Number of Dominant Species Total Area (DE, FACW, or FAC: 100.0% (ARE) Moley of the data from set on the data from	Slope(%): 0	Lat:	41.110553318	0641	Long:	-96.30954826	80981	Datum:	NAD	1983			
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If No, explain in Remarks) Are Vagetation	Soil Map Unit Nar	me: Gibbon loa	amy fine sand, c	verwash, occ	asionally floc	oded		NWI Classifi	cation:	None			
Are Vegetation	Are climatic / hydr	rologic conditions	on the site typica	al for this time	of year?	Yes X	No	(If No, ex	oplain in	Remarks)			
Are Vegetation	Are Vegetation	, Soil,	Hydrology	_, significant	ly disturbed?	,	Are "Normal	Circumstance	es" pres	sent? Yes	s X	No	
SUMMARY OF FINDINGS - Attach a site map showing sampling point locations, transects, important features, etc. Hydrohydr Vegetation Present? Yes X No Wettand Hydrology Present? Yes X No Remarks: The area characterized by this data form is an emergent wetland located in a drainage ditch east of S-29. The area displayed indicators of hydrophytic vegetation, hydric sols, and wetland hydrology. VECETATION Use scientific names of plants. Absolute Dominant Spaces Indicator Statum Shub Statum (Plot size: 15FL) 20 Y FACW Provem of Dominant Species Multiply by: Elecoharis polytical arrentation 20 Y FACW FACW Percent of Dominant Species 100.0% (AB) Herb Stratum 20 Y FACW FACW FACW FACW Phalamine anundinacea 10 N FACW FACW Multiply by: 100.0% (AB) Phalamine anundinacea 10 N FACW FACW Prevalence Index Worksheet: Yme Stratum 100 Tatal Cover Yes X 0 X 2 Vine Stratum 100 Tatal Cover FACW	Are Vegetation	, Soil,	Hydrology	_, naturally p	oroblematic?		(If needed	explain any a	answers	in Remark	s)		
Statum Yes X No Is the Sampled Area within a Wetland? Yes X No Hydrophyde Vegetation Present? Yes X No Is the Sampled Area within a Wetland? Yes X No Remarks: The area characterized by this data form is an emergent wetland located in a drainage ditch east of S-29. The area displayed indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. Dominance Test Worksheet: Number of Dominant Species A. (A) Shub Stratum (Plot size: 15Ft) 20 Y FACW FACW Total Number of Dominant Species Total Number of Dominant Species 100.0% (AB) Hetch Stratum 20 Y FACW FACW FACW Total Number of Dominant Species 100.0% (AB) Prevalence Index Worksheet: 70 Y FACW FACW Total Number of Dominant Species 100.0% (AB) Phalares anurdinacea 10 N FACW FACW FACW species 0 x1 = 30 Yine Stratum 100 N FACW FACW FACW species 0.4 < 2.2			Attach a ci	to man ch	owing cor	mpling poi	int locatio	ne trance		mortant	footu	iros of	~
Is the Sampled Area Welland Hydrology Present? Yes X No Welland Hydrology Present? Yes X No Remarks: The area characterized by this data form is an emergent welland located in a drainage dich east of S-23. The area displayed indicators of hydrophytic vagatation, hydric soils, and wetland hydrology. Dominance Test Worksheet: VEGETATION- Use scientific names of plants. Absolute Dominant Status Strub Stratum (Plot size: 15Ft	Hydrophytic Ver	netation Present?	Yes X	No	owing sai	iipiilig po		115, 1141150	5013, 1	mportam	Teatu	103, 00	U .
Wetland Hydrology Present? Yes X No Remarks: The area characterized by this data form is an emergent wetland located in a drainage ditch east of S-29. The area displayed indicators of hydrophytic vigetation, hydric soils, and wetland hydrology. VEGETATION- Use scientific names of plants. Absolute X.Cowr Dominant Subsolute Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A) Shub Stratum (Plot size: 15Ft) 30 Y FACW FACW Total Number of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A) Hetb Stratum (Plot size: 6 Ft) 0 Y FACW FACW Total Number of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A) Phagmites austratis 20 Y FACW FACW Total % Cover of. Multiply by: Convolvus aneresis 10 N FACW OBL, FACW, or FAC: Total % Cover of. Multiply by: Vine Stratum 100 N FACW OBL, FACW, or FAC: Total % Cover of. Multiply by: Vine Stratum 100 N FACW OBL, FACW, or FAC: Total % Cover of. Multiply by: Vine Stratum 100 N<	Hvdric Soil Pres	sent?	Yes X	No	Is the S	ampled Area	l						
Remarks: The area characterized by this data form is an emergent wetland located in a drainage ditch east of S-29. The area displayed indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. VEGETATION - Use scientific names of plants. Absolute 24 Geven 520 (Control of the control o	Wetland Hydrold	ogy Present?		No	within a	Wetland?		Yes	X	No			
Nonlinks. Vergetation, hydro solis, and wetland hydrology. VEGETATION- Use scientific names of plants. Absolute variable	Remarks:												
VEGETATION- Use scientific names of plants. Absolute %cover Dominant Species Indicator Status Dominance Test Worksheet: Iree Stratum Imbo Stratum (Plot size: 15Ft)) Imbo Stratum Total Number of Dominant Are OBL, FACW, or FAC: 4 (A) Shrub Stratum (Plot size: 6 Ft)) Imbo Stratum Total Number of Dominant Are OBL, FACW, or FAC: 4 (B) Pinagmities australis 20 Y FACW Percent of Dominant Total % Cover of: 100.0% (AB) Eleocharis palustris 20 Y FACW OBL, FACW, or FAC: 100.0% (AB) Phalaris aundinacea 10 N FACW OBL, Secvices 30 x1 = 30 Typha latifolia 100 N FACW OBL species 30 x1 = 30 Yine Stratum Y FACW FACW FACW species 0 x4 = 0 Vine Stratum 100 Image Stratus 100 X4 = 0 0 X4 = 0 Vine Stratum 100 Image Stratus X4 = 0 1.83 X4 = 0 0 Vine Stratum Y FACW	The area charac vegetation, hydri	terized by this data ic soils, and wetlar	a form is an eme nd hydrology.	ergent wetland	l located in a	drainage dito	ch east of S-2	29. The area	displaye	ed indicators	s of hydi	rophytic	
Tree Stratum Dominant Species 4 (A) Shub Stratum (Plot size: 15Ft) 20 Y FACW Salix interior 20 Y FACW Species 4 (A) Hath Stratum (Plot size: 6 Ft) Percent of Dominant Species 100.0% (A/B) Eleocharis paluetris 20 Y OBL Prevalence Index Worksheet: 100.0% (A/B) Convolvulus arvensis 10 N FACW Total Accost of Multiply by: 100.0% (A/B) Phalaris arundinacea 10 N FACW OBL species 30 x 1 = 30 Yine Stratum 100 N FACW OBL species 30 x 1 = 30 Yine Stratum 100 N FACW OBL species 30 x 1 = 30 Yine Stratum 100 N FACW OBL species 10 x 3 = 30 Yine Stratum Yine Stratum 100 N FACW OBL species 0 x 5 = 0 Vine Stratum Vine Stratum 100	VEGETATIO	N _ Use scienti	ific names of	plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominona	o Toot	Workshoot			
Shrub_Stratum (Plot size: 15Ft _) Salix interior 20 Y FACW 20 = "Total Cover Total Number of Dominant Species Herb Stratum (Plot size: 6 Ft _) Phragmites australis 30 Y FACW Equisetum hyemale 20 Y FACW Convolvulus arvensis 10 N FAC Typha latifolia 10 N FACW Typha latifolia 10 N FACW 100 = "Total Cover FACW Species Vine Stratum 10 N FACW	Tree Stratum				<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	<u></u>	<u></u>	Number of	f Domin	ant Species	•		
Salix interior 20 Y FACW 20 =Total Cover FACW Herb Stratum (Plot size: 6 Ft) Phragmites australis 30 Y FACW Eleocharis palustris 20 Y OBL Eleocharis palustris 20 Y OBL Eleocharis palustris 20 Y OBL Prevalence Index Worksheet: Total % Cover of: Multiply by: Ornovibulus arvensis 10 N FACW Typha latifolia 10 N OBL 100 =Total Cover FACW OBL species 30 x1 = 30 Yine Stratum 10 N OBL FACW species 0 x2 = 160 Vine Stratum 100 =Total Cover FACW species 0 x4 = 0 UPL species 0 x4 = 0 UPL species 0 x5 = 0 Column Totals 120 (A) 220 (B) Prevalence Index = B/A 1.83 Hydrophytic Vegetation Indicators: X Rajid Test for Hydrophytic Vegetation (Explain) Vine Stratum	Shrub Stratum							That Are C	OBL, FA	CW, or FA): _	4	(A)
20 =Total Cover Total Cover Total Cover Herb Stratum (Plot size: 6 Ft) 30 Y FACW Eleocharis palustris 20 Y OBL Equisetum hyenale 20 Y OBL Ornolvulus arvensis 10 N FACW Phalaris arundinacea 10 N FACW Typha tatifolia 10 N FACW Uine Stratum_ 000 =Total Cover Multiply by: Vine Stratum_ 000 =Total Cover FACW Vine Stratum_ 000 =Total Cover FAC Species 00 x 4 = .0 UPL species 0 x 5 = .0 Count of totals: 120 (A) 220 (B) Prevalence Index So ro a separate sheet) 700 =Total Cover FAC U species 0 x 4 = .0 UPL species 0 x 5 = .0 Count Totals: 120 (A) 220 (B) Prevalence Index So ro a separate sheet .0 .5 = .0 .0 .5 = .0 .0 .5 = .0 .0 .5 = .0 .0 <t< td=""><td>Salix inter</td><td>ior (Plot size</td><td>e:<u>15Ft</u>)</td><td></td><td>20</td><td>v</td><td>FACW</td><td>Total Num</td><td>har of [</td><td>ominant</td><td></td><td></td><td></td></t<>	Salix inter	ior (Plot size	e: <u>15Ft</u>)		20	v	FACW	Total Num	har of [ominant			
Herb Stratum (Plot size: <u>6 Ft</u>) Phragmites australis 30 Y Equisetum hygmale 20 Y Convolvulus arvensis 10 N Phala fish arundinacea 10 N Typha latifolia 10 N 100 Total % Cover of: Multiply by: Vine Stratum 00 N Vine Stratum 10 N Vine Stratum 10 N Vine Stratum 10 N Vine Stratum 100 N Vine Stratum 120 (A) Vine Stratum 20 (A) Vine Stratum 120 (A) Vine Stratum 20 (A)					20	-Total Cover		Species A	cross al	l Strata:		4	(B)
Privation (Prior Size_DFL) Privatines australis 30 Y FACW Equisetum hyemate 20 Y OBL Equisetum hyemate 20 Y OBL Privatines australis 10 N FACW Prevalence Index Worksheet: Total % Cover of: Multiply by: Convolvulus arvensis 10 N FACW Phataris anundinacea 10 N OBL FACW Typha latifolia 10 N OBL FACW Species 30 × 1 = 30 Yine Stratum	Herb Stratum	(Plot size	o: 6 []+ \								_		_
Eleccharis palustris 20 Y OBL Equisetum hyemale 20 Y OBL Convolvulus avensis 10 N FACW Phalaris arundinacea 10 N FACW Typha latifolia 10 N FACW Uine Stratum 0BL FACW species 30 ×1 =30 Vine Stratum 10 N OBL FACW species 80 ×2 =	Phragmite	(PIOL SIZ) es australis	e: <u>6Ft</u>)		30	Y	FACW	Percent of That Are C	Domina	ant Species	· _	100.0%	(A/B)
Equisetum hyemale 20 Y FACW Prevalence Index Worksheet: Convolvulus arvensis 10 N FACW OBL species 30 X1 = 30 Phalaris arundinacea 10 N FACW OBL species 80 X2 = 160 Typha latifolia 10 N OBL FACW OBL species 80 X2 = 160 Vine Stratum 100 N OBL FACU species 0 X3 = 30 Vine Stratum 100 N OBL FACU species 0 X4 = 0 UPL species 0 X5 = 0 X5 = 0 Column Totals: 120 (A) 220 (B) Prevalence Index = B/A= 1.83 Hydrophytic Vegetation Indicators: X Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Wortpological Adaptation con a separate sheet. Hydrophytic	Eleocharis	s palustris			20	Ŷ	OBL		, i / i		·•		
Convolvulus arvensis 10 N FAC Total % Cover of: Multiply by: Phalaris arundinacea 10 N FACW OBL species 30 x 1 = 30 Typha latifolia 10 N OBL FACW Secies 80 x 2 = 160 100 =Total Cover FAC species 80 x 2 = 160 Vine Stratum 100 =Total Cover FAC species 0 x 4 = 0 Vine Stratum 0 =Total Cover 0 x 5 = 0 x 5 = 0 Vine Stratum 0 =Total Cover 0 x 5 = 0 x 5 = 0 Vine Stratum 0 =Total Cover 0 x 5 = 0 0 x 5 = 0 Vine Stratum 0 =Total Cover 0 x 5 = 0	Equisetum	n hyemale			20	Y	FACW	Prevalenc	e Index	Workshee	t:		
Phataris arundinacea 10 N FACW OBL species 30 x1 = 30 Typha latifolia 10 N OBL FACW species 80 x2 = 160 100 =Total Cover FACW species 80 x2 = 160 Vine Stratum FACW species 0 x4 = 0 UPL species 0 x4 = 0 UPL species 0 x5 = 0 Column Totals: 120 (A) 220 (B) Prevalence Index = B/A= 1.83 1.83 1.83 Hydrophytic Vegetation Indicators: X Rapid Test for Hydrophytic Vegetation X X Rapid Test for Hydrophytic Vegetation (Explan) N N Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Problematic. Hydrophytic Vegetation (Explan) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No	Convolvul	us arvensis			10	N	FAC	Total 9	% Cove	r of:	Mult	iply by:	
Typha latifolia 10 N OBL FACW species 80 x 2 = 160	Phalaris a	rundinacea			10	Ν	FACW	OBL speci	es	30	_ x 1 =	30	
Vine Stratum FAC species 10 x 3 = 30 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 120 (A) 220 (B) Prevalence Index = B/A= 1.83 Hydrophytic Vegetation Indicators: X Rapid Test for Hydrophytic Vegetation X Rapid Test for Hydrophytic Vegetation X X Prevalence Index = 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No	Typha latit	folia			10	N	OBL	FACW spe	ecies	80	_ x 2 =	160	
Vine Stratum					100	=Total Cover	r	FAC speci	es	10	x 3 =	30	
UPL species 0 x5 = 0 Column Totals: 120 (A) 220 (B) Prevalence Index = B/A= 1.83 1.83 Hydrophytic Vegetation Indicators: X Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Y Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Yes X No No Remarks: (Include photo numbers here or on a separate sheet.) Yes	Vine Stratum	-						FACU spe	ecies	0	x 4 =	0	
Column Totals: 120 (A) 220 (B) Prevalence Index = B/A= 1.83 Hydrophytic Vegetation Indicators: X X Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No								UPL speci	es	0	x 5 =	0	
Prevalence Index = B/A= 1.83 Hydrophytic Vegetation Indicators: X X Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.)								Column To	otals:	120	(A)	220	(B)
Hydrophytic Vegetation Indicators: X Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No								Prev	alence	Index = B/A	=	1.83	
Hydrophytic Vegetation Indicators: X Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X Remarks: (Include photo numbers here or on a separate sheet.)								L harden en haarde		tation India			
X Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X Remarks: (Include photo numbers here or on a separate sheet.)									Toot to			tation	
X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No									Test to	r Hydropnyt	c veget	ation	
X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.)									ance I	est > 50%			
Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.)								X Preval	lence In	dex ≤ 3.0			
								Morph	lologica 1 Rema	l Adaptation	s (Prov separate	<pre>'ide supp 'ide supp</pre>	orting
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No								Proble	ematic H	lydrophytic	Vegetat	ion (Exp	olain)
Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.)								Indicators be preser	s of hydi nt, unles	ric soil and v s disturbed	vetland or prob	hydrolog lematic.	y must
Remarks: (Include photo numbers here or on a separate sheet.)								Hydro Vegetation	phytic n Prese	nt? Yes	х	No	
The second device distance is a the device of a constant of	Remarks: (Incluc	le photo numbers	here or on a sep	arate sheet.)				1					



OIL						Sampling Poi	nt: S-31
Profile Description: (Desc	ribe to the de	pth nee	eded to docur	nent the indicat	or or confirm the	e absence of Indicators.)	
Depth	Matrix			Redox Featur	res		
(inches) Color	(moist)	%	Color (moi	<u>st) % T</u>	Type ¹ Loc ²	Texture	Remarks
Type: C=Concentration, D	=Depletion, RI	M=Redu	ced Martix, C	S=Covered or Cc	bated Sand Grains	S. ² Location: PL=Pore Lining, M	=Matrix.
Iydric Soil Indicators:						Indicators for Problematic Hyd	ric Soils: ³
Histosol (A1)		[Sandy Gleye	ed Matrix (S4)		Coast Prairie Redox (A16)	
Histic Epipedon (A2)		[Sandy Redo	x (S5)		☐ Iron-Manganese Masses (F12)	
Black Histic (A3)		[Stripped Ma	ıtrix (S6)			
Hydrogen Sulfide (A4)		[Loamy Mucl	ky Mineral (F1)			
Stratified Layers (A5)		[Loamy Gley	ed Matrix (F2)		Very Shallow Dark Surface (TF12	<u>'</u>)
2 cm Muck (A10)		Г	Depleted Ma	atrix (F3)		Other (Explain in Remarks)	
Depleted Below Dark Surf	ace (A11)	ſ	Redox Dark	Surface (F6)			
Thick Dark Surface (A12)		[erk Surface (F7)			
Sandy Mucky Mineral (S1)		ſ		ressions (ER)		³ Indicators of hydrophytic vegetation	on and
	(00)	L		essions (Fo)		wetland hydrology must be present	, unless
5 cm Mucky Peat or Peat	53)					disturbed of problematic.	
Restrictive Layer (In Type:	observed):						
Depth (inches):						Hydric Soil Present? Yes	X No
Vetland Hydrology India Primary Indicators (minimu	ators:	auired:	check all that :	apply)		Secondary Indicators (minimu	um of two require
Surface Water (A1)		quirou, t	Water-S	tained Leaves (B9))		(6)
High Water Table (A2)				Fauna (B13)		Drainage Patterns (B1	0)
Saturation (A3)			True Aa	uatic Plants (B14)		Dry-Season Water Tab	ble (C2)
Water Marks (B1)			Hydroge	n Sulfide Odor (C1))	Crayfish Burrows (C8)	. ,
Sediment Deposits (B2)			Oxidized	I Rhizospheres alor	ng Living Roots (C3)	Saturation Visible on A	verial Imag.(C9)
Drift Deposits (B3)			Presenc	e of Reduced Iron ((C4)	Stunted or Stressed Pl	ants (D1)
Algal Mat or Crust (B4)			Recent I	ron Reduction in PI	lowed Soils (C6)	Geomorphic Position (D2)
Iron Deposits (B5)			L Thin Mu	ck Surface (C7)		FAC-Neutral Test (D5)	
Inundation Visible on Aeria	I Imagery (B7)		Gauge o	or Well Data (D9)			
Sparsely Vegetated Conca	ve Surf. (B8)		Other (E	xplain in Remarks))		
ield Observations:							
Surface Water Present?	Yes _	<u>X</u> No	D D	epth (inches):	3		
Water Table Present?	Yes _	No	D <u>X</u> D	epth (inches):		Wotland Hydrology Procest?	
Saturation Present?	Yes _	<u>X</u> No	D D	epth (inches):	0	Wetland Hydrology Present?	Yes <u>X</u> NO
Describe Recorded Data (strea	m gauge, monite	oring well	, aerial photos,	previous inspection	ns), if available:		
Remarks:							
The area is located in a draina	ge ditch and wa	as inunda [.]	ted at the time o	of the field visit; wet	tland hydrology criter	ria is met.	

Project/Site:	Gretna Botto	oms			City/Coun	ty:	Sarpy Cour	nty	Sampling [Date:	4/30/20)15	
Applicant/Owner:	Lyman-	Richey C	Corporation				State	E NE	Sampling	Point:	S-32		
Investigators:	Ben Fisher	•		Austin Zig	ller		Section, Tov	wnship, Range	S 17	T 13N	R	10E	
Landform (hillslop	oe, terrace, e	etc.):	Depre	ssion			Local Rel	lief (concave, c	onvex, non	e): C	oncave		
Slope(%): 5-10	0	Lat: 4	41.1029718	672676	Long:	-96.31218381	7684	Datum:	NAD 1983				
Soil Map Unit Na	me: Ingle	ewood-N	lovina comp	lex, occasior	ally flooded			NWI Classifica	tion: Nor	ie			
Are climatic / hyd	rologic condi	itions on	the site typ	ical for this tir	me of year?	Yes X	No	(If No, exp	lain in Rem	arks)			
Are Vegetation	<u>X</u> , Soil	<u>X</u> , H	ydrology	, significa	antly disturbed?)	Are "Normal	Circumstances	" present?	Yes	÷	No	Х
Are Vegetation	, Soil	, H	ydrology	, naturall	y problematic?		(If needed,	explain any an	swers in Re	emarks	3.)		
SUMMARY	OF FINDIN	NGS - A	Attach a s	site map s	howing sa	mplina poi	nt locatio	ons. transec	ts. impo	rtant	featu	res. et	c.
Hydrophytic Veg	getation Pres	sent?	Yes	No X									
Hydric Soil Pres	sent?		Yes	No X	Is the S	ampled Area		N	N	v			
Wetland Hydrol	ogy Present?	?	Yes	No X	within t	i Wettand .		res	NO		_		
Remarks:													
The area charac vegetation, hydri	cterized by th ic soils, and v	is data fo wetland l	orm is an up hydrology c	bland area loo riteria. The ai	cated adjacent	to an open wa be recently g	iter area. The graded and p	e area failed to lanted with a ry	display ind /e grass co	icators ver cro	of hydro p.	ophytic	
VEGETATIO	N_ Use so	cientific	c names o	of plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominance	Test Work	shoot			
Tree Stratum								Number of [Dominant S	pecies			
Shrub Stratum	n							That Are OE	BL, FACW,	or FAC):	0	(A)
Herb Stratum	- (DL	ot cizo:	6 Et)				Total Numbe	er of Domin	ant			
Lolium pe	renne	01 5120.	υΓι	.)	100	Y	FACU	Species Acr	oss all Stra	ta:		1	(B)
					100	=Total Cover		Dereent of D	aminant Cr				_
Vine Stratum	_							That Are OB	L, FACW, o	or FAC	:	0.0%	(A/B)
								Prevalence	Index Wor	kshee	t:		
								Total %	Cover of:		Multi	ply by:	
								OBL species	S	0	_ x 1 =	0	
								FACW speci	es	0	x 2 =	0	
								FAC species	S	0	x 3 =	0	
								FACU spec	ies	100	_ x 4 =	400	
								UPL species		0	x 5 =	0	
								Column Tota	als:	100	_(A)	400	<u>(</u> B)
								Preval	lence Index	= B/A	=	4.00	
								Hydrophytic	Vegetatio	n Indic	ators:		
								Rapid T	est for Hyd	rophyti	c Vegeta	ation	
								Domina	nce Test >	50%			
								Prevaler	nce Index ≤	3.0			
								Morphol data in F Problem	ogical Ada Remarks or atic Hydrop	otation on a s ohytic '	s (Provi eparate √egetati	ide supp sheet) on (Ex	porting
								Indicators of be present,	f hydric soi unless dist	l and v urbed	/etland h	nydrolog ematic.	jy must
Remarks: (Includ	de photo nur	nbers he	re or on a s	eparate shee	t.)			Hydropl Vegetation	nytic Present?	Yes		<u>No</u>	<u>x</u>
The area is dom	inated by up	land veg	etation.	,	,								



Profile Descr	iption: (Desc	ribe to the	depth nee	eded to document	the indic	cator or c	onfirm t	he absence of Indicators.)	
Depth		Matrix		R	edox Fea	atures			
(inches)	Color (moist)	%	Color (moist)	%	Type 1	Loc ²	Texture	Remarks
0 to 6	10YR	4/1	100					LOAMY SAND	
6 to 18	10YR	4/2	60					SANDY LOAM	
6 to 18	10YR	3/1	40					SANDY LOAM	
¹ Type: C=Con	centration, D=	Depletion,	RM=Redu	ced Martix, CS=Co	overed or	Coated S	and Grai	ns. ² Location: PL=Pore Lining, N	1=Matrix.
Hydric Soil I	indicators:		г	_				Indicators for Problematic Hyd	lric Soils: ³
Histosol (A	1)			Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A16)	
Histic Epipe	edon (A2)		[Sandy Redox (S5	5)			Iron-Manganese Masses (F12)	
Black Histic	c (A3)		[Stripped Matrix (S	6)			Dark Surface (S7)	
Hydrogen S	Sulfide (A4)		[Loamy Mucky Mir	neral (F1)				2)
Stratified La	ayers (A5)		[Loamy Gleyed Ma	atrix (F2)				2)
2 cm Muck	(A10)		[Depleted Matrix (F3)			Other (Explain in Remarks)	
Depleted B	elow Dark Surfa	ace (A11)	[Redox Dark Surfa	ace (F6)				
Thick Dark	Surface (A12)		Γ	Depleted Dark Su	Irface (F7)				
Sandy Muc	kv Mineral (S1)		Г		ns (F8)			³ Indicators of hydrophytic vegetati	on and
5 cm Muck	y Peat or Peat (S3)	L		10 (1 0)			wetland hydrology must be presen disturbed or problematic.	t, unless
Restrict	ive Layer (if	observed	d):						
Туре:									
Depth (inch	nes):							Hydric Soli Present? Fes	5 <u>NO A</u>
Remarks:									
The observed :	soil profile conta	iins disturbed	I soils; the a	area appeared to have	e been rece	ently grade	d.		
HYDROLOG	Ϋ́Υ								
Wetland Hyd	drology Indic	ators:	required: (check all that apply	d)			Secondary Indicators (minim	um of two required)
			required, t						
	ater (A1) r Table (A2)				Leaves (I	D9)			50) (0)
					Diante (B1)	4)		Dry-Season Water Ta	0) ble (C2)
	(A3) kc (B1)				fide Odor (۳) (C1)			1
	Denosite (B2)				ospheres a	along Living	n Roots (C	(23) Saturation Visible on	Aerial Imag.(C9)
	sits (B3)				educed Irr	on (C4)	g 1.0010 (0	Stunted or Stressed P	lants (D1)
Algal Mat g	or Crust (B4)			Recent Iron R	eduction ir	n Plowed S	oils (C6)	Geomorphic Position	(D2)
	its (B5)			Thin Muck Su	Inface (C7)		()	FAC-Neutral Test (D5)
	Visible on Aeria	l Imagery (B)	7)	Gauge or We	ll Data (D9	9)			,
Sparsely V	egetated Conca	ve Surf. (B8)	,	Other (Explain	n in Remar	rks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	No	o <u>X</u> Depth	(inches):				
Water Table	Present?	Yes	No	o <u>X</u> Depth	(inches):				
Saturation Pr	resent?	Yes	N	o <u>X</u> Depth	(inches):			Wetland Hydrology Present?	Yes No_X_
Describe Record	ded Data (strea	m daude, mo	nitorina well	l, aerial photos, previo	ous inspec	tions), if av	ailable:		
		J J .,	5	,					
Remarks:	to meet	d buden	ritoria						
	a to meet wettan	a nyarology (Junenia.						
1									

Project/Site: Gretna Bo	ottoms	City/County:	Sarpy Cour	nty Sam	pling Date:	4/30/20	15	
Applicant/Owner: Lyma	an-Richey Corporation		State	: <u>NE</u> San	npling Point:	S-33		
Investigators: Ben Fisl	ner Aust	in Zigler	Section, Tov	wnship, Range S ²	17 T 13N	i R 1	0E	
Landform (hillslope, terrace	e, etc.): Depression		Local Re	lief (concave, conve	ex, none): C	oncave		
Slope(%): 0	Lat: 41.1028727730784	Long: -96.31238	98601382	Datum: NAD	D 1983			
Soil Map Unit Name: Ir	nglewood-Novina complex, occ	asionally flooded		NWI Classification:	None			
Are climatic / hydrologic co	nditions on the site typical for t	his time of year? Yes	K No	(If No, explain i	n Remarks)			
Are Vegetation, Sc	il, Hydrology, sig	nificantly disturbed?	Are "Normal	Circumstances" pre	esent? Yes	3 X	No	
Are Vegetation, Sc	il, Hydrology, na	turally problematic?	(If needed,	explain any answer	rs in Remarks	s.)		
SUMMARY OF FIND	NGS - Attach a site m	ap showing sampling r	oint locatio	ons. transects.	important	featur	es. et	C.
Hydrophytic Vegetation F	resent? Yes No	X		,			<u>,</u>	
Hydric Soil Present?	Yes No	X Is the Sampled A	rea					
Wetland Hydrology Prese	ent? Yes X No		ſ	Yes X	NO			
Remarks:								
The area characterized by	this data form is an open wate	er lake with steeply incised ban	ks.					
				T				
VEGETATION- Use	scientific names of plan	ts. <u>Absolute</u> <u>Dominar</u> % Cover Species	<u>nt Indicator</u> s Status	Dominanco Tos	t Workshoot			
		<u></u>		Number of Domi	nant Species	•		
				That Are OBL, F	ACW, or FAC): 	0	(A)
				Total Number of	Dominant			
				Species Across a	all Strata:		0	(B)
								_
				That Are OBL, F	ACW, or FAC	:	0.0%	(A/B)
				Prevalence Inde	x worksnee	τ: •••••••		
					er or: 0	1000000000000000000000000000000000000		
				OBL species	0	_ x 2 =	0	
				FAC w species	0	_ ^	0	
				FAC species	0	_ x 4 =	0	
				FACU species	0	_ x 5 =	0	
				UPL species		_ (^)		(D)
				Column Totals:	0	_(A)	0	(B)
				Prevalence	e Index = B/A	=		
				Hydrophytic Veg	etation Indic	ators:		
				Rapid Test fo	or Hydrophyti	ic Vegeta	ation	
				Dominance	Test > 50%			
				Prevalence I	ndex ≤ 3.0			
				Morphologic	al Adaptation	s (Provi	de supp	orting
				data in Rema	arks or on a s Hydrophytic '	separate Vegetatic	sheet) on (Ex	nlain)
				Indicators of hyd	dric soil and v	vetland h	ydrolog	jy must
				Hydrophytic Vegetation Pres	ent? Voc		No '	 Y
Remarks: (Include photo r No vegetation was observ	numbers here or on a separate ed as the area is open water.	sheet.)			165			<u> </u>



Profile Description: (Describe to the depth needed to document the Indicator or confirm the absence of Indicators:) Redox Features: Redox Features: Redox Features: Redox Features: Redox Features: Redox Features: Remarks: Type 1 Loc 2 Texture Remarks: Remarks: Topic: C-Concentration, De-Depletion, RM-Reduced Martix, CS=Covered or Coated Sand Grains: Accast or Problematic Hydric Soils: 3	SOIL					Sampli	ng Point: S-33
Deptity Matrix Redox Features (nches) Color (moist) % Color (moist) % Type 'LoC 2 Texture Remarks Type: C-Concentration, D-Debpetion, RM-Reduced Marik, CS+ Covered or Coated Sand Grains *Location: PL=Pore Lining, MeMarik. Hydric Soil Indicators: Indicators: Indicators: Indicators: Coast Prairs Redox (A16) Hatsia (A1) Sandy Respect Marik (S6) Inon-Manganese Masses (F12) Dark Surface (F12) Black Hatsi (A3) Leamy Gleged Marik (S6) Dark Surface (F12) Other (Explain in Remarks) 2 com Mark (A10) Leamy Gleged Marik (F2) Other (Explain in Remarks) Other (Explain in Remarks) Sondy Marky Meeral (A11) Redox Dark Surface (F12) Other (Explain in Remarks) Other (Explain in Remarks) Sondy Marky Meeral (A11) Redox Dark Surface (F7) * * Indicators of Infrintum of two required values (A11) Sondy Marky Meeral (A12) Depleted Dark Surface (F7) * * Indicators (minimum of one is required; check all that apply) Ype: Type: No 2 Remarks: No 2 Remarks: No 2 Secondary Indicators (minimum of two required; Check all that apply) Secondary In	Profile Description: (Desc	ribe to the dep	pth need	ed to document the indicat	tor or confirm the	absence of Indicators.)	
(inches) Color (moist) % Color (moist) % Type 1 Loc 2 Texture Remarks Type: C-Concentration, D-Depletion, RM-Reduced Martix, CS=Covered or Coated Sand Grains. A. Oastion: PL=Pore Lining, M=Matrix. Hatca Explored (A1) Sandy Glayed Matrix (S4) Indicators for Problematic IIV-dric Sails; 3 Hatca Explored (A2) Sandy Glayed Matrix (S4) Ioo and Praine Reduck (A16) Hatca Explored Matrix (A3) Sandy Glayed Matrix (S5) Ioo and Praine Reduck (A16) Hydrogon Suitike (A4) Leamy Glayed Matrix (F2) Dark Surface (S7) Lydrogon Suitike (A3) Depleted Matrix (F2) Dark Surface (S7) Sendificat Layers (A5) Leamy Glayed Matrix (F3) Depleted Matrix (F3) Depleted Matrix (F3) Depleted Matrix (F3) Depleted Matrix (F3) Send Mucky Mineral (S1) Redox Daprossions (F8) * Indicators of hydrophytic vegetation and welland hydrology must be present, unless distabled of problematic. Remarks: No all sample was observed. Area is open water. Hydric Soil Present? Yes	Depth	Matrix		Redox Featu	res		
Type: C-Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix. Type: C-Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix. Type: C-Concentration, D=Depletion, RM=Reduced Martix, (S4)	(inches) Color	moist)	%	Color (moist) %	Type ¹ Loc ²	Texture	Remarks
Hydric Soil Indicators: Indicators for Problematic Hydric Soils: ³ Histoc Epigedin (A2) Sandy Redox (S5) Black Histic (A3) Stripped Matrix (S4) Black Histic (A3) Stripped Matrix (S6) Black Histic (A3) Stripped Matrix (S6) Black Histic (A3) Stripped Matrix (S5) Brack Histic (A4) Loomy Mudoy Mineral (F1) Daptone Suffice (A4) Domy Gleyd Matrix (F2) Daptone Dark Surface (A11) Redox Depressions (F6) Thick Dark Stringe (A2) Opplewed Matrix (F2) Daptoned Below Dark Surface (A11) Redox Depressions (F8) * S cm Mucky Mineral (S1) Redox Depressions (F8) * S cm Mucky Mineral (S1) Redox Depressions (F8) * Mydric Soil Present? Yes	¹ Type: C=Concentration, D=	Depletion, RM	1=Reduce	ed Martix, CS=Covered or Co	oated Sand Grains	. ² Location: PL=Pore Lin	ing, M=Matrix.
Heat Epiperdon (A2) Sandy Redox (S2) Inon-Manganeek Masses (F12) Black Heitik (A3) Stripped Matrix (S6) Dark Surface (S7) Stripped Matrix (S6) Dark Surface (TF12) Dark Surface (TF12) Stripped Matrix (S6) Depieted Matrix (S1) Dref (Explain in Remarks) Depieted Matrix (S1) Depieted Matrix (F3) Depieted Dark Surface (A11) Sandy Mucky Mineral (S1) Depieted Dark Surface (F7) * Sandy Mucky Mineral (S1) Depieted Dark Surface (F7) * Sort Mucky Peat or Peat (S3) Depieted Dark Surface (F7) * Sort Mucky Mineral (S1) Redox Depressions (F8) * * Mucky Mineral (S1) Redox Depressions (F8) * * No _ 2 Primary Indicators * * * No _ 2 Primary Indicators (Ininimum of one is required; check all that apply) * * * Secondary Indicators (Ininimum of two required; check all that apply) Secondary Indicators (Ininimum of two required; check all that apply) Secondary Indicators (Ininimum of two required; check all that apply) Secondary Indicators (Ininimum of two required; check all that apply) Secondary Indicators (Ininimum of two required; check all that apply) Secondary Indicators (Ininimum of two required; ch	Hydric Soil Indicators: Histosol (A1)			Sandy Gleyed Matrix (S4)		Indicators for Problemati	<u>c Hydric Soils:</u> ³
Dear Surface (S7) Surface (S1) Dear Surface (S2) Dear Surface Suff Cracks (S8) Dear Surface (S1) Durdeator Viable on Aerial Imag.(C0) Surface (S1) Dear Surface (S2) Dear Surface (S2) Dear Surface (S1) Dear Surface (S1) Durdeator Suff (S1) Dear Surface (S1) Durdeator Suff (S1) Dear Surface (S1) Dear Surface (S2) Dear Surface Suff (S2) Dear Surface (S2) Dear Surface (S2) Dear	☐ Histic Epipedon (A2)			Sandy Redox (S5) Stripped Matrix (S6)		Iron-Manganese Masses (F12)
Image: Testing of the stress of the stres	Hydrogen Sulfide (A4)			Loamy Mucky Mineral (E1)		Dark Surface (S7)	
Outmot Depict Quark (F3) Other (Explain in Remarks) Depicted Marks (F3) Depicted Marks (F3) Other (Explain in Remarks) Sandy Mucky Mineril (S1) Depicted Marks (F3) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic. Sandy Mucky Mineril (S1) Redox Dark Surface (F7) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic. Sandy Mucky Mineril (S1) Redox Dark Surface (F7) 4 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic. Sandy Mucky Mineril (S1) Redox Dark Surface (F7) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless distributed or problematic. Type:	Stratified Lavers (A5)			Loamy Gleved Matrix (F2)		Very Shallow Dark Surface	e (TF12)
Compared Particles (A11) Pedeco Matrix (F3) Pedeco Matrix (F4) Pedeconder Matrix (F4) Presence of Reduced Iron (C4) Pedeconder Iron Reduction in Plowed Solis (C6) PraceNeutral Test (C5) Paralee Patrians (F4) Pedeconder Iron Reduction in Plowed Solis (C6) Patrians Matrix (F4) Pedeconder Iron Reduction in Plowed Solis (C6) Patrians Matrix (F4) Pedeconder Iron Reduction in Plowed Solis (C6) Patrians Matri	$\frac{1}{2} \operatorname{cm} \operatorname{Muck} (A10)$			Dealete d Mateix (52)		Other (Explain in Remarks	3)
□ bepteted below Uark Surface (A12) □ Depleted Dark Surface (FP) □ Sandy Mucky Mineral (S1) □ Depleted Dark Surface (FP) □ Sandy Mucky Mineral (S1) □ Redox Depressions (FB) □ Sem Mucky Peat or Peat (S3) □ Idicators of hydrophytic vegetation and wetand hydrophytic vegetation and vetand hy				Depleted Matrix (F3)			
Indicators of hydrophylic vegetation and wetland hydrophylic vegetation. Som Kudy Mater Kits Hydric Soil Present? Yes No 2 Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required is an all standare (B1) Dysoason Water Table (C2) Sourdae Water Table (A2) Aquatic Fauna (B13) Dysoason Water Table (C2) Surface Soil Cracks (B6) Secondary Indicators (B1) Hydrophydrophylic vegetation (C4) Dysoason Water Table (C2) Sourdae Water (B1) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) <	Depleted Below Dark Surfa	ice (A11)		Redox Dark Surface (F6)			
Sndy Mucky Mineral (S1) Redox Depressions (F8) Indicativg only the vegenation and a distribution by doing your programmed and a distribution of your problematic. S cm Mucky Peat or Peat (S3) Wetland Hydrology (not problematic.) Prestrictive Layer (if observed): Type:	☐ Thick Dark Surface (A12)			Depleted Dark Surface (F7)		³ Indicators of hydrophytic y	agatation and
S cm Mucky Peat or Peat (S3) disturbed or problematic. Restrictive Layer (if observed): Type: Type:	Sandy Mucky Mineral (S1)			Redox Depressions (F8)		wetland hydrology must be p	present, unless
Restrictive Layer (if observed): Type:	5 cm Mucky Peat or Peat (S3)				disturbed or proble	matic.
Image:	Restrictive Layer (if	observed):					
Deprint (inches):	Type:					Hydric Soil Present?	Yes No X
Itemarks: No soil sample was observed. Area is open water. YDROLOGY Veltand Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Staturation (A3) Sediment Deposits (B2) Orifi Deposits (B3) Prino Deposits (B3) Prino Deposits (B3) Prino Deposits (B3) In und ator Crust (B4) Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) YetLand Present? Yes No Zourdace Water Present? Yes No Depth (inches): und rable Present? Yes No Depth (inches): water Table Present? Yes No Depth (inches): Wetland Hydrology Presen			_				
Primary Indicators (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required; Surface Water (A1) Quatic Fauna (B13) Drainage Patterns (B10) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidzed Rhizospheres along Living Roots (C3) Saturation Visible on Aerial Imag.(C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Field Observations:	IYDROLOGY Wetland Hydrology Indic	ators:					
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Implementation Adjuate Fadura (F13) Defailing Prateins (F10) Adjuate Fadura (F13) Defailing Prateins (F10) Defailing Prateins (F10) Saturation (A3) True Aquatic Plants (B14) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Saturation Visible on Aerial Imag.(C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Adjal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Field Observations:	Surface Water (A1)			Water-Stained Leaves (B9))	Surface Soil Cr	acks (B6)
Staturation (A3) Intel Adjuate Plants (B1) Diy-Season water rabie (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Saturation Visible on Aerial Imag.(C9) Diff Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorphic Position (D2) Innudation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) FAC-Neutral Test (D5) Spresely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Wetland Hydrology Present? Yes Yes No X Depth (inches): unknown Wetland Hydrology Present? Yes X No_ Vater Table Present? Yes No X Depth (inches): water Table Present? Yes X No_ Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No_ Pescribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: The area displayed indicators of wetland hydrology as it is open water.	High Water Table (A2)			Aquatic Fauna (B13)			ns (BTU)
Water Marks (B1) Hydrogen Sultide Odd (C1) Calinar Burlows (C0) Calinar Burlows (C0) Saturation Visible on Aerial Imag.(C9) Drift Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Saturation Visible on Aerial Imag.(C9) Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorphic Position (D2) Inon Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Yeld Observations: Saturation Present? Yes No X Depth (inches): unknown Wetland Hydrology Present? Yes No Z Depth (inches): Wetland Hydrology Present? Yes No Z Depth (inches): Wetland Hydrology Present? Yes X No Depth (inches): Wetland Hydrology Present? Yes X No Depth (inches): Wetland Hydrology Present? Yes X No Depth (inches):	\square Saturation (A3)			Ludragen Sulfide Oder (C1			
Selfment Deposits (B2) Obliced Millosphires and pumiles	Water Marks (B1)				l) Ing Living Booto (C2)		vs (CO)
In the books (bb) Inserted of Reducted find (c4) Inserted of Reducted find (c4) Algal Mat or Crust (B4) Inserted of Reduction in Plowed Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Inin Muck Surface (C7) FAC-Neutral Test (D5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) FAC-Neutral Test (D5) Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Yield Observations: unknown Water Table Present? Yes No X Depth (inches): unknown Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes Saturation Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: If available: If available: If available: temarks: The area displayed indicators of wetland hydrology as it is open water. <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>sed Plants (D1)</td>							sed Plants (D1)
Iron Deposits (B5) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Stried Observations: Surface Water Present? Yes No X Depth (inches): unknown Water Table Present? Yes No X Depth (inches): unknown Water Table Present? Yes No X Depth (inches): unknown Wetland Hydrology Present? Yes Yes No X Depth (inches): Wetland Hydrology Present? Yes Yes No X Depth (inches): Wetland Hydrology Present? Yes Yes No X Depth (inches): Wetland Hydrology Present? Yes Yes No X Depth (inches): Wetland Hydrology Present? Yes X No Yes No Yes	Algal Mat or Crust (B4)			Recent Iron Reduction in P	lowed Soils (C6)		sition (D2)
In unit Boly control (BC) In undation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Cield Observations: Surface Water Present? Yes Yes No X Depth (inches): unknown Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No X Depth (inches): Wetland Hydrology Present? Yes X No X Depth (inches): Wetland Hydrology Present? Yes X No X Depth (inches): Wetland Hydrology Present? Yes X No X Depth (inches): Wetland Hydrology Present? Yes X No X Depth (inches): Wetland Hydrology Present? Yes X No X Depth (inches): Wetland Hydrology Present? Yes X No X Depth (inches): Wetland Hydrology as it is open water.	Iron Deposits (B5)			Thin Muck Surface (C7)		EAC-Neutral Te	est (D5)
Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Surface Water Present? Yes No X Depth (inches): unknown Wetland Hydrology Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes Yes No X Depth (inches): Wetland Hydrology Present? Yes X No X Depth (inches): Wetland Hydrology Present? Yes X No X No X Depth (inches): Present? Yes X No X No X Depth (inches): Yes	Inundation Visible on Aeria	l Imagery (B7)		Gauge or Well Data (D9)			
Cield Observations: Yes X No Depth (inches): unknown Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Remarks: The area displayed indicators of wetland hydrology as it is open water.	Sparsely Vegetated Conca	ve Surf. (B8)		Other (Explain in Remarks))		
Surface Water Present? Yes X No	ield Observations:						
Water Table Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Remarks: The area displayed indicators of wetland hydrology as it is open water.	Surface Water Present?	Yes	X No	Depth (inches):	unknown		
Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Remarks: The area displayed indicators of wetland hydrology as it is open water. It is open water.	Water Table Present?	Yes	No	X Depth (inches):			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: The area displayed indicators of wetland hydrology as it is open water.	Saturation Present?	Yes	No	X Depth (inches):		Wetland Hydrology Preser	nt? Yes <u>X</u> No
Remarks: The area displayed indicators of wetland hydrology as it is open water.	Describe Recorded Data (strea	m gauge, monito	ring well, a	erial photos, previous inspection	ns), if available:		
रemarks: The area displayed indicators of wetland hydrology as it is open water.							
The area displayed indicators of wetland hydrology as it is open water.	Remarks:						
	The area displayed indicators	of wetland hydro	logy as it is	s open water.			

Project/Site: Gre	etna Bottoms			City/Coun	ty:	Sarpy Cour	nty	Sampling	Date:	4/30/20)15	
Applicant/Owner:	Lyman-Richey	Corporatio	on			State	: NE	Sampling	Point:	S-34		
Investigators: B	en Fisher		Austin Zigle	er		Section, Tov	vnship, Range	S 16	T 13N	R	10E	
Landform (hillslope,	terrace, etc.):	Dep	ression			Local Rel	ief (concave, c	onvex, noi	ne): Co	oncave		
Slope(%): 0	Lat:	41.096046	61301044	Long:	-96.30913081	75191	Datum:	NAD 198	3			
Soil Map Unit Name	: Nishna silt	y clay loam	, occasionally flo	oded			NWI Classifica	ation: No	ne			
Are climatic / hydrold	ogic conditions c	on the site ty	ypical for this tim	e of year?	Yes X	No	(If No, exp	lain in Ren	narks)			
Are Vegetation	, Soil,	Hydrology	, significar	ntly disturbed?	,	Are "Normal	Circumstances	s" present?	' Yes	Х	No	
Are Vegetation	, Soil,	Hydrology	, naturally	problematic?		(If needed,	explain any ar	swers in F	₹emarks	.)		
SUMMARY OF	FINDINGS -	Attach a	a site map sh	nowing sa	mpling poi	nt locatio	ons, transed	cts, impo	ortant	featu	res, e	tc.
Hydrophytic Vegeta	ation Present?	Yes	X No									
Hydric Soil Presen	t?	Yes	X No	Is the S within a	ampled Area		Vos	X No				
Wetland Hydrology	y Present?	Yes	X No				163			-		
Remarks:				1								
The area characteri hydrophytic vegetat	ized by this data tion, hydric soils	form is an , and wetlar	emergent wetlar nd hydrology.	nd located in a	a drainage ditc	h east of So	uth 252nd Stre	et. The are	∍a displa	iyed inc	licators	of
VEGETATION_	Use scienti	fic names	s of plants.	Absolute	Dominant	Indicator						
Troe Strotum				<u>% Cover</u>	Species	<u>Status</u>	Dominance	Test Wor	ksheet:			
<u>Tree Stratum</u>							Number of I That Are Of	Dominant S	Species		2	(A)
Shrub Stratum								,				_
Herb Stratum	(Plot size	e: <u>6 Ft</u>)				Total Number	er of Domi	nant		2	(P)
Spartina pect	tinata			30	Y	FACW		035 all 017	ala.	_		(D)
Phalaris arun	idinacea				- <u>Y</u>	FACW	Percent of D	Oominant S	pecies		100.0%	(A/B)
Bromus inern	nis			5	N	FACU	That Are OE	BL, FACW,	or FAC:	. —		_ ()
Galium aparir	ne			2	N	FACU	Prevalence	Index Wo	rksheet	:		
				62	=Total Cover		Total %	Cover of:		Multi	iply by:	
Vine Stratum							OBL species	S	0	x 1 =	0	
							FACW spec	ies	50	x 2 =	100	
							FAC species	S	5	x 3 =	15	
							FACU spec	ies	7	x 4 =	28	
							UPL species		0	x 5 =	0	
									62	 (A)	143	(B)
							Column Tota	als:		_('') _		
							Preva	lence Inde	x = B/A=		2.31	
							Hydrophytic	Vegetatio	on Indica	ators:		
							X Rapid T	est for Hyd	drophytic	: Vegeta	ation	
							X Domina	nce Test >	50%			
							X Prevale	nce Index	≤ 3.0			
							Morpho data in l	logical Ada Remarks o	aptations or on a so	3 (Provi eparate	ide supp sheet)	porting
							Problem	hatic Hydro	pnytic V	egetati	on (Ex	.piain)
							Indicators of be present,	ot hydric so unless dis	oil and w	etland l or probl	nydrolog ematic.	jy must
							Hydrop Vegetation	hytic Present?	Yes	x	No	
Remarks: (Include p	photo numbers h	nere or on a	separate sheet.)								

The area displayed dominant hydrophytic vegetation and approximately 40% bare ground.



Profile Descr	iption: (Des	ribe to the	depth ne	eded to document	the indi	cator or	confirm t	he absence of Indicators.)	
Depth	Calar	Matrix	0/	R	edox Fe	atures	1	Tautura	Demeric
(Inches)	Color	(moist)	<u>%</u>	Color (moist)	%	Туре	LOC 2		Remarks
0 to 4	10YR	3/1	100						
4 to 16	10YR	3/1	80						Mixed Matrix
4 to 16	10YR	4/1	15	7.5YR 4/6	5	<u> </u>	<u>M</u>		Mixed Matrix
16 to 18	10YR	4 / 1	90	7.5YR 4/6	10		<u>M</u>		
Type: C=Cor	icentration, D	=Depletion	RIVI=Real	lced Martix, CS=Co	overed of	Coated	Sand Grai	Ins. 4Location: PL=Pore	Lining, M=Matrix.
Hydric Soil I	indicators:							Indicators for Problem	natic Hydric Soils: ³
Histosol (A	1)			Sandy Gleyed Ma	atrix (S4)			Coast Prairie Rodey (/	16)
Histic Epip	edon (A2)			Sandy Redox (S5	5)				ees (F12)
Black Histid	c (A3)			Stripped Matrix (S	56)				
Hydrogen S	Sulfide (A4)			Loamy Mucky Mir	neral (F1)				
Stratified L	ayers (A5)			Loamy Gleyed Ma	atrix (F2)			Very Shallow Dark Su	rface (TF12)
2 cm Muck	(A10)			Depleted Matrix (F3)			Other (Explain in Rem	arks)
	elow Dark Sur	ace (A11)		Bedox Dark Surfa	ace (E6)				
Thick Dark	Surface (A12)				urfaco (E7	`			
Sandy Muc	sky Mineral (S1	`)		³ Indicators of hydrophyt	tic vegetation and
		(62)			ns (Fo)			wetland hydrology must disturbed or pro	be present, unless
		(33)							
	ive Layer (i	f observe	d):						
Type:	,							Hydric Soil Present?	Yes X No
Depth (incr	nes):								
The observed	soil profile mee	ts hydric soil	criteria.						
		-							
HYDROLOG	Y								
Wotland Hw	irology Indi	cotors.							
Primary Indic	ators (minim	um of one is	s required:	check all that apply	()			Secondary Indicato	rs (minimum of two required)
Surface W/	$rater (\Lambda 1)$			Water-Stainer	d Leaves	(B9)		Surface Sol	I Cracks (B6)
High Water	r Table (A2)				a (B13)	(85)			atterns (B10)
Saturation	(A3)			True Aquatic	Plants (B1	4)		Dry-Seasor	Water Table (C2)
Water Mark	(, io) ks (B1)			Hydrogen Sul	fide Odor	(C1)		Crayfish Bu	rrows (C8)
Sediment [Deposits (B2)			Oxidized Rhiz	ospheres	along Livir	g Roots (C	C3) Saturation	/isible on Aerial Imag.(C9)
Drift Depos	sits (B3)			Presence of F	Reduced I	ron (C4)		Stunted or S	Stressed Plants (D1)
Algal Mat c	or Crust (B4)			Recent Iron R	eduction i	in Plowed S	Soils (C6)	Geomorphi	c Position (D2)
Iron Depos	its (B5)			🗌 Thin Muck Su	urface (C7)		✓ FAC-Neutra	al Test (D5)
Inundation	Visible on Aeri	al Imagery (E	37)	Gauge or We	ll Data (D	9)			
Sparsely V	egetated Conc	ave Surf. (B8)	Other (Explain	n in Rema	ırks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	Ν	lo X Depth	(inches):				
Water Table	Present?	Yes	N	lo X Depth	(inches):				
Saturation P	resent?	Yes	XN	lo Depth	(inches):		2	Wetland Hydrology Pre	sent? Yes <u>X</u> No
Describe Recor	ded Data (strea	am gauge, me	onitorina we	II. aerial photos, previo	ous inspe	ctions), if a	vailable:		
2000.001.0001		in gaage, m	ernternig ne	., aona protos, proto		uiono), ii u	anabioi		
Remarks:									
The area dia !	oved indicate	of worker	varologi						
The area displa	ayed indicators	of wetland h	ydrology.						
The area displa	ayed indicators	of wetland h	ydrology.						

Project/Site:	Gretna Bottoms			City/Coun	ity:	Sarpy Cour	nty	Sampling Date:	4/30/20	015	
Applicant/Owner	r: Lyman-Rich	ey Corporation				State	: NE	Sampling Point	:: S-35		
Investigators:	Ben Fisher	A	ustin Zigle	r		Section, Tov	wnship, Range	S 16 T 13	N R	10E	
Landform (hillslo	ope, terrace, etc.):	Depressio	n			Local Rel	lief (concave, c	onvex, none):	Concave		
Slope(%): 2	Lat	: 41.0960463703	751	Long:	-96.30928143	881929	Datum:	NAD 1983			
Soil Map Unit Na	ame: Nishna s	ilty clay loam, occa	sionally floo	oded			NWI Classifica	ation: None			
Are climatic / hy	drologic conditions	on the site typical	for this time	e of year?	Yes X	No	(If No, exp	lain in Remarks)		
Are Vegetation	, Soil	, Hydrology,	significant	tly disturbed?	?	Are "Normal	Circumstances	s" present? Y	es X	No	
Are Vegetation	, Soil	, Hydrology	naturally	problematic?		(If needed	evolain anv an	Iswers in Remar	ke)		
			monoh		malina na	(il lieeded,			ND.)		-
Hydrophytic V	OF FINDINGS		map sn	owing sa	mpling po	int locatio	ons, transec	ts, importar	<u>it leatu</u>	res, et	.C.
Hydric Soil Pre	esent?	Ves N		Is the S	ampled Area	I					
Wetland Hydro	plogy Present?			within a	a Wetland?		Yes	No X	, •		
Domorkov	07	Tes									
The area chara	acterized by this da	ta form is an upland	d area adja	cent to the w	etland charac	terized in S-3	34. The area fa	iled to display in	dicators o	of	
	getation, nythe sol		lology.								
VEGETATIC	DN – Use scien	tific names of p	lants.	Absolute % Cover	Dominant Species	Indicator Status	Dominance	Test Workshee	et:		
Tree Stratum	<u>1</u>						Number of [Dominant Specie	es		
Shrub Stratu	m						That Are OE	BL, FACW, or FA	\C:	0	(A)
Herb Stratum) (Plot si	70°6Et)					Total Numbe	er of Dominant			
Bromus	inermis	(<u>)</u>		90	Y	FACU	Species Acr	oss all Strata:		1	(B)
Galium a	aparine			10	N	FACU	Dereent of D	aminant Chasia	_		
Descura	inia incana			2	Ν	UPL	That Are OB	BL, FACW, or FA	s \C: —	0.0%	(A/B)
Taraxac	um officinale			2	Ν	FACU		I			
				104	=Total Cover	r	Prevalence	Index Workshe	et:		
Vine Stratum	<u>1</u>						I otal %	Cover of:	Mult	iply by:	
							OBL species	s		0	
							FACW spec	ies	^Z	0	
							FAC species	S	X	408	
							FACU spec	ies <u>102</u>	X4 =	400	
							UPL species	s <u> </u>	X 3 =	10	
							Column Tota	als:104	(A)	418	(B)
							Preval	lence Index = B/	'A=	4.02	
							Hydrophytic	Vegetation Ind	icators:		
							Rapid T	est for Hydrophy	∕tic Veget	ation	
							Domina	nce Test > 50%			
							Prevaler	nce Index ≤ 3.0			
							Morphol data in F	logical Adaptatic Remarks or on a natic Hydrophytic	ns (Prov separate	ide supp sheet)	porting
							Indicators of be present,	of hydric soil and unless disturbe	wetland d or probl	hydrolog ematic.	gy must
							Hydropl Vegetation	hytic Present? Ye	s	_No	x
Remarks: (Inclu The area is dor	ude photo numbers minated by upland	s here or on a separ vegetation.	ate sheet.)								



SOIL

Profile Descri	ption: (Desc	ribe to the	depth nee	ded to document	the indic	cator or o	confirm t	the absence of Indicators.)	
Depth		Matrix		R	edox Fea	itures			_
(inches)	Color	(moist)		Color (moist)		Type 1	Loc 2	lexture	Remarks
0 to 18	10YR	3/2	98	7.5YR 4/6	2			SANDY CLAY LOAM	Sand mixed in top 4-6 inches
¹ Type: C=Con	centration, D	=Depletion,	RM=Reduc	ed Martix, CS=Co	vered or	Coated S	Sand Grai	ins. ² Location: PL=Pore	Lining, M=Matrix.
Hydric Soil In Histosol (A' Histic Epipe Black Histic Hydrogen S Stratified La 2 cm Muck Depleted Ba Thick Dark Sandy Muck 5 cm Mucky	ndicators: 1) 2don (A2) 4 (A3) 3ulfide (A4) ayers (A5) (A10) 2elow Dark Surf Surface (A12) ky Mineral (S1) 7 Peat or Peat	ace (A11)) (S3)		 Sandy Gleyed Ma Sandy Redox (S5 Stripped Matrix (S Loamy Mucky Mir Loamy Gleyed Ma Depleted Matrix (f Redox Dark Surfa Depleted Dark Su Redox Depression 	ttrix (S4)) 66) heral (F1) attrix (F2) =3) hce (F6) hface (F7) hs (F8)			Indicators for Problem Coast Prairie Redox (# Iron-Manganese Mass Dark Surface (S7) Very Shallow Dark Sur Other (Explain in Rem Indicators of hydrophyt wetland hydrology must disturbed or pro-	atic Hydric Soils: ³ A16) es (F12) face (TF12) arks) ic vegetation and be present, unless oblematic.
Type: Depth (inch Remarks: The observed s	es):	d to display ir	ndicators of h	ydric soil.				Hydric Soil Present?	Yes <u>No X</u>
HYDROLOG	Y								
Wetland Hyd Primary Indica Surface Wa High Water Saturation (Water Mark Sediment D Drift Deposi Algal Mat or	rology India ators (minimu ter (A1) Table (A2) A3) s (B1) reposits (B2) its (B3) r Crust (B4)	cators: um of one is	required; c	heck all that apply Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sulf Oxidized Rhize Presence of R Recent Iron Re) d Leaves (I a (B13) Plants (B14 ide Odor (ospheres a educed Ind eduction ir	B9) 4) C1) along Livin on (C4) n Plowed S	g Roots (C ioils (C6)	Secondary Indicator Surface Soi Drainage Pa Dry-Season Crayfish Bu Saturation V Stunted or S V Geomorphic	rs (minimum of two required) I Cracks (B6) atterns (B10) Water Table (C2) rrows (C8) <i>V</i> isible on Aerial Imag.(C9) Stressed Plants (D1) c Position (D2)
Iron Deposi	ts (B5) Visible on Aeria	al Imagery (B	7)	Thin Muck Su Gauge or Wel	rface (C7) Il Data (D9)		FAC-Neutra	Il Test (D5)

Field Observations:						
Surface Water Present?	Yes	No <u>X</u>	Depth (inches):			
Water Table Present?	Yes	No X	Depth (inches):			
Saturation Present?	Yes	No <u>X</u>	Depth (inches):		Wetland Hydrology Present?	Yes No_X_
Describe Recorded Data (stream	gauge, monitori	ng well, aerial phot	os, previous inspec	tions), if available:		

Other (Explain in Remarks)

Remarks:

The area failed to meet wetland hydrology criteria.

Sparsely Vegetated Concave Surf. (B8)



Project/Site: Gretna Bottoms	City/County	/:	Sarpy Cour	ity	Sampling D	Date:	4/30/20)15	
Applicant/Owner: Lyman-Richey Corporation			State	: NE	Sampling I	Point:	S-36		
Investigators: Ben Fisher Austin Zigle	er	ę	Section, Tov	vnship, Range	S 16	T 13N	R	10E	
Landform (hillslope, terrace, etc.): Depression			Local Rel	ief (concave, co	onvex, none	e): No	one		
Slope(%): 0 Lat: 41.1026710969593	Long: -9	96.307378278	37339	Datum:	NAD 1983				
Soil Map Unit Name: Gibbon-Wann complex, occasionally fl	ooded			NWI Classificat	tion: Non	e			
Are climatic / hydrologic conditions on the site typical for this tim	e of year?	Yes X	No	(If No, expla	ain in Rem	arks)			
Are Vegetation, Soil, Hydrology, significar	ntly disturbed?	Δ	re "Normal	Circumstances'	' present?	Yes	Х	No	
Are Vegetation, Soil, Hydrology, naturally	problematic?		(If needed.	explain any ans	swers in Re	emarks	.)		
SUMMARY OF FINDINGS - Attach a site man st	owing sam	nling noi	nt locatio	ns transec	ts imno	rtant	foatu	ras at	°C
Hydrophytic Vegetation Present? Yes X No	lowing sam	ipinig pon		113, 11411300	<u>13, impo</u>	<u>i tant</u>	Icatu	103, 01	0.
Hydric Soil Present? Yes X No	Is the Sa	mpled Area							
Wetland Hydrology Present? Yes X No	within a	wetland?		Yes)	(No		_		
Remarks:									
The area characterized by this data form is an emergent wetlan hydrophytic vegetation, hydric soils, and wetland hydrology.	nd located in a g	grass swale s	outh of Fair	view Road. The	area displ	ayed in	dicator	s of	
VEGETATION Use scientific names of plants.	Absolute % Cover	Dominant Species	Indicator Status	D	T = = () 4 / = =				
Tree Stratum	<u>/// COver</u>	Opecies	<u>Status</u>	Dominance	lest Work	sheet:			
Charle Strategy				That Are OB	L, FACW,	or FAC	: _	2	(A)
				Total Numba	r of Domin	ot			
(Plot size: <u>6 Ft</u>)	25	V	EAC)A/	Species Acro	oss all Strat	ant ta:		3	(B)
Spartina pectinata			FACW	-					
Bromus inermis	20	Y	FACU	Percent of Do That Are OB	ominant Sp L. FACW. (ecies	:	66.7%	(A/B)
Phalaris arundinacea	10	N	FACW						
	100	=Total Cover		Prevalence I	ndex Worl	ksheet	:		
Vine Stratum				Total % (Cover of:		Multi	ply by:	
				OBL species		0	_ X 1 =	0	
				FACW specie	es	80	_ X Z =	160	
				FAC species		0	_ X 3 =	0	
				FACU specie	es	20	_ X 4 =	80	
				UPL species		0	_ X 5 =	0	
				Column Tota	ls:	100	(A)	240	(B)
				Prevale	ənce Index	= <i>B</i> / <i>A</i> =	-	2.40	
				Hydrophytic	Vegetatior	n Indic:	ators:		
				Rapid Te	est for Hydr	rophytic	: Veget	ation	
				X Dominar	ice Test > !	50%			
				X Prevalen	ice Index ≤	3.0			
				Morpholo	ogical Adar	otations	3 (Prov	ide supp	orting
				data in R Problema	emarks or atic Hydrop	on a se ohytic V	əparate ′egetati	sheet) on (Ex	plain)
				Indicators of be present,	i hydric soil unless dist	l and w	etland I or probl	nydrolog ematic.	ly must
				Hydroph Vegetation F	ytic Present?	Yes	x	No	
Remarks: (Include photo numbers here or on a separate sheet.)			1					



Profile Descr	ription: (Des	cribe to the	depth nee	eded to document	the indi	cator or	confirm t	he absence of Indicators.)	
Depth	Calar	Matrix	0/	R	edox Fe	atures	1	Tautura	Demente
(inches)	Color	(moist)	%	Color (moist)	%	Type	Loc 2	lexture	Remarks
0 to 4	10YR	3/1	100		·			SANDY LOAM	
4 to 18	10YR	3/1	60		·			SANDY LOAM	Mixed Matrix
4 to 18	10YR	4/1	35	7.5YR 4/6	5	С	M	SANDY LOAM	Mixed Matrix
¹ Type: C=Cor	ncentration, D	=Depletion,	RM=Redu	iced Martix, CS=Co	overed or	Coated S	Sand Grai	ns. ⁴ Location: PL=Pore Lining	J, M=Matrix.
Hydric Soil I	Indicators:							Indicators for Problematic I	Hydric Soils: ³
Histosol (A	(1)		l	Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A16)	
Histic Epip	edon (A2)		[Sandy Redox (S5	5)			☐ Iron-Manganese Masses (F1	2)
Black Histi	c (A3)		[Stripped Matrix (S	S6)			Dark Surface (S7)	
Hydrogen S	Sulfide (A4)		[Loamy Mucky Mi	neral (F1)				TE12)
Stratified L	ayers (A5)		[Loamy Gleyed M	atrix (F2)				1F12)
2 cm Muck	(A10)		[Depleted Matrix (F3)			└─┘ Other (Explain in Remarks)	
Depleted B	Below Dark Sur	face (A11)	[Redox Dark Surfa	ace (F6)				
Thick Dark	Surface (A12)		[Depleted Dark Su	urface (F7)			
Sandy Muc	cky Mineral (S1)	[Redox Depressio	ns (F8)	,		³ Indicators of hydrophytic vege	etation and
5 cm Muck	v Peat or Peat	(S3)	ı	· · · · · · · · · · · · · · · · ·				wetland hydrology must be pre disturbed or problema	sent, unless atic.
Restrict	ive I aver (if observe	d):						
Type.									
Depth (incl	hes):							Hydric Soil Present?	Yes X No
Remarks:									
The observed	soil profile mee	ets hydric soil	criteria.						
HYDROLOG	ĞΥ								
Wetland Hyd	drology Indi	icators:							
Primary Indic	cators (minim	um of one is	required;	check all that apply	/)			Secondary Indicators (mir	nimum of two required)
Surface Wa	ater (A1)			Water-Staine	d Leaves	(B9)		Surface Soil Crack	(B6)
High Wate	r Table (A2)			Aquatic Fauna	a (B13)	(20)		☐ Drainage Patterns	(B10)
Saturation	(A3)			True Aquatic	Plants (B1	4)		Dry-Season Water	r Table (C2)
U Water Mar	ks (B1)			Hydrogen Sul	fide Odor	(C1)		Crayfish Burrows	(C8)
Sediment [Deposits (B2)			Oxidized Rhiz	ospheres	along Livir	ng Roots (C	C3) Saturation Visible	on Aerial Imag.(C9)
Drift Depos	sits (B3)			Presence of F	Reduced Ir	ron (C4)		Stunted or Stresse	ed Plants (D1)
Algal Mat o	or Crust (B4)			Recent Iron R	eduction i	in Plowed S	Soils (C6)	Geomorphic Positi	ion (D2)
Iron Depos	sits (B5)			Thin Muck Su	urface (C7)		✓ FAC-Neutral Test	(D5)
Inundation	Visible on Aer	ial Imagery (B	7)	Gauge or We	ell Data (D	9)			
Sparsely V	egetated Conc	ave Surf. (B8)	Other (Explain	n in Rema	ırks)			
Field Observ	vations:								
Surface Wate	er Present?	Yes	N	o X Depth	(inches):				
Water Table	Present?	Yes	N	o X Depth	(inches):				
Saturation P	resent?	Yes	<u> X N</u>	o Depth	(inches):		4	Wetland Hydrology Present?	Yes <u>X</u> No
Describe Recor	ded Data (stre	am gauge, mo	onitoring wel	l, aerial photos, previ	ous inspec	ctions), if a	vailable:		
Remarks [.]									
The area displ	ayed indicators	s of wetland h	ydrology.						

Project/Site: Gretna Bottoms	City/Coun	ty:	Sarpy Cour	nty	Sampling Date:	4/30/20)15	
Applicant/Owner: Lyman-Richey Corporation			State	: NE	Sampling Point:	S-37		
Investigators: Ben Fisher Austin Zigler	•	;	Section, Tov	vnship, Range	S 16 T 13N	R	10E	
Landform (hillslope, terrace, etc.): Hillslope			Local Rel	ief (concave, co	onvex, none): <u>Co</u>	onvex		
Slope(%): 1 Lat: 41.1026922233839	Long:	-96.307248352	28788	Datum:	NAD 1983			
Soil Map Unit Name: Gibbon-Wann complex, occasionally flo	oded			NWI Classificat	tion: None			
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes X	No	(If No, expla	ain in Remarks)			
Are Vegetation, Soil, Hydrology, significant	ly disturbed?	γ Α	re "Normal	Circumstances'	present? Yes	Х	No	
Are Vegetation, Soil, Hydrology, naturally p	oroblematic?		(If needed,	explain any ans	wers in Remarks	.)		
SUMMARY OF FINDINGS - Attach a site map sho	owing sar	nplina poir	nt locatio	ns. transec	ts, important	, featu	res. et	c.
Hydrophytic Vegetation Present? Yes No X	<u>-</u>				<u></u>			
Hydric Soil Present? Yes X No	Is the S	ampled Area						
Wetland Hydrology Present? Yes No X	within a			Yes	NOX	_		
The area characterized by this data form is an upland area locate hydrophytic vegetation and wetland hydrology; however, the area	ed adjacent t a met hydric	to the wetland soil criteria.	characterize	ed in S-36. The	area failed to disp	lay indi	cators o	of
VEGETATION Use scientific names of plants.	Absolute % Cover	Dominant Species	Indicator Status	Deminence	Toot Werkshoot			
Tree Stratum	<u>/// 00/101</u>	openes	<u>otatas</u>	Dominance				
Christian Christian				That Are OB	L, FACW, or FAC	: _	0	(A)
				Total Number	n of Dominant			
Plot size: <u>6 Ft</u>)	95	V	FACU	Species Acro	oss all Strata:		1	(B)
Spartina pectinata		- <u> </u>	FACU					_ ` `
Carex festucacea	5	N	FACW	 Percent of Do That Are OBI 	ominant Species		0.0%	(A/B)
	100	=Total Cover			_, + / (0 / , 0 + / (0 .			
Vine Stratum_				Prevalence I	ndex Worksheet	:		
				Total % (Cover of:	Multi	ply by:	
				OBL species	0	x 1 =	0	
				FACW specie	es <u>15</u>	_ x 2 =	30	
				FAC species	0	x 3 =	0	
				FACU specie	əs <u>85</u>	_ x 4 =	340	
				UPL species	0	x 5 =	0	
				Column Tota	ls:100	(A)	370	<u>(</u> B)
				Prevale	ənce Index = B/A=	=	3.70	
				Hydrophytic	Vegetation Indic:	ators:		
				Rapid Te	est for Hydrophytic	: Veget	ation	
				Dominan	ice Test > 50%	•		
				Prevalen	ce Index ≤ 3.0			
				Morpholo	ogical Adaptations	(Prov	ide supr	porting
				data in R Problema	emarks or on a se atic Hydrophytic V	∍parate ′egetati	sheet) on (Ex	plain)
				Indicators of be present,	hydric soil and wurden and wurden and wurden and wire and wir	etland h or probl	nydrolog ematic.	gy must
				Hydroph Vegetation F	ytic Present? Yes		No	x
Remarks: (Include photo numbers here or on a separate sheet.) The area is dominated by upland vegetation.								



Profile Descr	iption: (Des	cribe to the	depth nee	eded to docume	nt the indi	cator or	confirm	the absence of Indicators.)		-
Depth		Matrix			Redox Fea	atures				
(inches)	Colo	r (moist)	%	Color (moist)	%	Type 1	Loc ²	Texture	Remarks	
0 to 6	10YR	3/2	95	7.5YR 4/6	5	С	М	SANDY CLAY LOAM		
6 to 18	10YR	2/1	95	7.5YR 4/6	5	С	Μ	SANDY CLAY LOAM		
¹ Type: C=Con	centration, [D=Depletion,	RM=Redu	ced Martix, CS=0	Covered or	Coated S	Sand Gra	ins. ² Location: PL=Pore Lining, I	M=Matrix.	
Hydric Soil I	ndicators:							Indicators for Problematic Hy	dric Soils: ³	
Histosol (A	1)			Sandy Gleyed N	Matrix (S4)			Coast Prairie Redox (A16)		
Histic Epipe	edon (A2)		[Sandy Redox (S	S5)			☐ Iron-Manganese Masses (F12)		
Black Histic	c (A3)		[Stripped Matrix	(S6)			Dark Surface (S7)		
Hydrogen S	Sulfide (A4)		[Loamy Mucky M	/lineral (F1)				10)	
Stratified La	ayers (A5)		[Loamy Gleyed I	Matrix (F2)				12)	
2 cm Muck	(A10)		[Depleted Matrix	: (F3)			└── Other (Explain in Remarks)		
Depleted B	elow Dark Su	rface (A11)	•	Redox Dark Sur	rface (F6)					
Thick Dark	Surface (A12)	Γ	Depleted Dark S	Surface (F7)	1				
Sandy Muc	ky Mineral (S	1)	ſ	Redox Depress	ions (F8)			³ Indicators of hydrophytic vegeta	tion and	
5 cm Muck	y Peat or Pea	t (S3)	L					wetland hydrology must be prese disturbed or problematic	nt, unless	
Restrict	ive Layer (if observe	d):							
Туре:										
Depth (inch	ies):							Hydric Soil Present? Ye	s X No	
Remarks:										
The observed s	soil profile me	ets hydric soil	criteria.							
HYDROLOG	Y									
Wetland Hyd	lrology Ind	icators:								
Primary Indic	ators (minim	num of one is	required; o	check all that app	oly)			Secondary Indicators (minin	num of two required))
Surface Wa	ater (A1)			Water-Stain	ed Leaves (B9)		Surface Soil Cracks	(B6)	
High Water	Table (A2)			Aquatic Fau	na (B13)			Drainage Patterns (B	10)	
Saturation	(A3)			True Aquatio	c Plants (B1	4)		Dry-Season Water Ta	able (C2)	
Water Mark	(B1)			Hydrogen S	ulfide Odor ((C1)		Crayfish Burrows (C8	5)	
Sediment D	Deposits (B2)			Oxidized Rh	izospheres	along Livir	g Roots (0	C3) Saturation Visible on	Aerial Imag.(C9)	
Drift Depos	its (B3)			Presence of	Reduced Ir	on (C4)		Stunted or Stressed	Plants (D1)	
Algal Mat o	r Crust (B4)			Recent Iron	Reduction in	n Plowed S	Soils (C6)	Geomorphic Position	(D2)	
Iron Depos	its (B5)			Thin Muck §	Surface (C7))		FAC-Neutral Test (D	5)	
	Visible on Ae	rial Imagery (B	7)	Gauge or W	/ell Data (DS)) 				
	egetated Con	cave Surf. (B8)		ain in Remai	rks)				
Field Observ	<u>ations:</u>									
Surface Wate	er Present?	Yes	No	Dept	h (inches):					
Water Table	Present?	Yes	No	Dept	h (inches):			Watland Hydrology Procent?	Vac No V	,
Saturation Pr	esent?	Yes	No	Dept	h (inches):			wettand hydrology Fresent?		<u> </u>
Describe Record	ded Data (stre	eam gauge, mo	onitoring well	, aerial photos, prev	vious inspec	tions), if a	vailable:			
Remarks:										
The area failed	to meet wetla	and hydrology	criteria. The	area is elevated ab	ove the adja	acent wetla	ind.			



Project/Site:	Gretna Bottoms		City/Coun	ty:	Sarpy Cour	nty	Sampling Dat	te: 4,	/30/20	15	
Applicant/Owner	r: Lyman-Richey	y Corporation			State	: NE	Sampling Po	int: S	S-38		
Investigators:	Ben Fisher	Austin Zigle	r		Section, Tov	vnship, Range	S 16 T	13N	R ′	10E	
Landform (hillslo	ope, terrace, etc.):	Depression			Local Rel	ief (concave, co	onvex, none):	Con	cave		
Slope(%): 0	Lat:	41.1028750002072	Long:	-96.29361388	88241	Datum:	NAD 1983				
Soil Map Unit Na	ame: Gibbon loa	amy fine sand, overwash, oco	asionally floc	oded		NWI Classificat	tion: None				
Are climatic / hy	drologic conditions of	on the site typical for this time	e of year?	Yes X	No	(If No, expla	ain in Remark	ks)			
Are Vegetation	, Soil,	Hydrology, significan	tly disturbed?	, ,	Are "Normal	Circumstances'	present?	Yes	х	No	
Are Vegetation	, Soil,	Hydrology, naturally	problematic?		(If needed.	explain any ans	swers in Rem	arks.)			
SUMMARY		Attach a site man sh	owing sa	mnlina noi	nt locatio	ns transec	ts import	ant f	eatur	res et	c
Hydrophytic Ve	egetation Present?	Yes X No	oning ou		<u>Int looutio</u>		<u>,port</u>	<u>une n</u>	Jatai	00, 00	0.
Hydric Soil Pre	esent?	Yes X No	Is the S	ampled Area							
Wetland Hydro	ology Present?	Yes X No	within a	a wetland?		Yes)	(No				
Remarks:											
The area chara hydrophytic ve	cterized by this data getation, hydric soils	a form is an emergent wetland , and wetland hydrology crite	d located in a ria.	i drainage ditc	h south of Fa	airview Road. T	he area displ	ayed ii	ndicat	ors of	
VEGETATIO	DN – Use scienti	fic names of plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominanaa					
Tree Stratum	ı		<u>// 00701</u>	000000	otatas	Number of D	lest worksn				
Shrub Stratu	- 					That Are OB	L, FACW, or	FAC:		3	(A)
Uorb Stratu	<u></u>					Total Numba	r of Dominon	.+			
Schoone	(Plot size	2: <u>6 Ft</u>)	20	V		Species Acro	ss all Strata:	ı		3	(B)
Phalaris	arundinacea			- <u> </u>	FACW	_					_
Schoend	plectus tabernaemonta	ani		- <u> </u>	OBL	 Percent of De That Are OBI 	ominant Spec	cies FAC:		100.0%	(A/B)
Equisetu	ım hyemale		10	N	FACW						
Typha la	tifolia		10	Ν	OBL	Prevalence I	ndex Works	heet:			
			90	=Total Cover		Total % (Cover of:		Multi	ply by:	
Vine Stratum	<u>1</u>					OBL species	60)	x 1 =	60	
						FACW specie	es <u>30</u>)	x 2 =	60	
						FAC species	0		x 3 =	0	
						FACU specie	es		× 4 =	0	
						UPL species	0		x 5 =	0	
						Column Tota	ls:9	0 (A) _	120	(B)
						Prevale	ence Index =	B/A=		1.33	
						Hydrophytic	Vegetation In	ndicat	ors:		
						X Rapid Te	est for Hydrop	ہ hytic	√egeta	ation	
						X Dominan	ice Test > 50	%			
						X Prevalen	ce Index ≤ 3.	.0			
						Morpholo	ogical Adapta	ations	(Provi	de supp	orting
						data in R Problema	emarks or or atic Hydrophy	ו a sep ytic Ve	òarate getatic	sheet) on (Exp	plain)
						Indicators of be present,	hydric soil a unless distur	nd wet bed or	land h	iydrolog [.] ematic.	y must
						Hydroph Vegetation F	ytic 'resent?	Yes	x	No	
Remarks: (Inclu	ide photo numbers l	here or on a separate sheet.)									



rotile Description: (Describe te	o the depth needed to document the indicator o	or confirm the absence of Indicators.)
Depth Matr	rix Redox Features	
(inches) Color (moist	t) % Color (moist) % Type	e ¹ Loc ² Texture Remarks
Type: C=Concentration, D=Deple	etion, RM=Reduced Martix, CS=Covered or Coated	d Sand Grains. 4Location: PL=Pore Lining, M=Matrix.
Iydric Soil Indicators:	_	Indicators for Problematic Hydric Soils: ³
Histosol (A1)	Sandy Gleyed Matrix (S4)	Coast Prairie Redox (A16)
Histic Epipedon (A2)	Sandy Redox (S5)	Iron-Manganese Masses (F12)
Black Histic (A3)	Stripped Matrix (S6)	Dark Surface (S7)
Hydrogen Sulfide (A4)	Loamy Mucky Mineral (F1)	
Stratified Layers (A5)	Loamy Gleyed Matrix (F2)	
☐ 2 cm Muck (A10)	Depleted Matrix (F3)	Other (Explain in Remarks)
Depleted Below Dark Surface (A	11) Redox Dark Surface (F6)	
Thick Dark Surface (A12)	Depleted Dark Surface (F7)	
Sandy Mucky Mineral (S1)	Redox Depressions (F8)	³ Indicators of hydrophytic vegetation and
5 cm Mucky Peat or Peat (S3)		wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if obs	erved):	
Type:		
Depth (inches):		Hydric Soil Present? Yes X No
YDROLOGY		
YDROLOGY Vetland Hydrology Indicators		Secondory Indicators (minimum of two requir
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c	one is required; check all that apply)	Secondary Indicators (minimum of two requires Surface Seil Creates (PE)
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c ✓ Surface Water (A1) High Water Table (A2)	s: one is required; check all that apply) Water-Stained Leaves (B9)	Secondary Indicators (minimum of two requires (B6)
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c Image: Surface Water (A1) High Water Table (A2) Image: Saturation (A3)	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13)	Secondary Indicators (minimum of two required Surface Soil Cracks (B6)
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c ✓ Surface Water (A1) ☐ High Water Table (A2) ✓ Saturation (A3) Water Marks (B1)	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	Secondary Indicators (minimum of two requined as a secondary Indicators (minimum of two requined as a secondary Indicators (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Cravfish Burrows (C8)
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of o ✓ Surface Water (A1) ☐ High Water Table (A2) ✓ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2)	Cone is required; check all that apply) Utater-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li	Secondary Indicators (minimum of two requires Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) ving Roots (C3)
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c ✓ Surface Water (A1) High Water Table (A2) ✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Cone is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4)	Secondary Indicators (minimum of two requires Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imag.(C9) Stunted or Stressed Plants (D1)
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c ✓ Surface Water (A1) ☐ High Water Table (A2) ✓ Saturation (A3) ☐ Water Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4)	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plower	Secondary Indicators (minimum of two requires Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imag.(C9) Stunted or Stressed Plants (D1) d Soils (C6)
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c ✓ Surface Water (A1) ☐ High Water Table (A2) ✓ Saturation (A3) ☐ Vater Marks (B1) ☐ Sediment Deposits (B2) ☐ Drift Deposits (B3) ☐ Algal Mat or Crust (B4) ☐ Iron Deposits (B5)	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plower Thin Muck Surface (C7)	Secondary Indicators (minimum of two requires Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imag.(C9) Stunted or Stressed Plants (D1) d Soils (C6) Image: FAC-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of or ✓ 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 Imag	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plower Thin Muck Surface (C7) gery (B7)	Secondary Indicators (minimum of two requires a surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imag.(C9) Stunted or Stressed Plants (D1) d Soils (C6) Image: Patterns (D5)
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c ✓ 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 Imag Sparsely Vegetated Concave Sur	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Plower Thin Muck Surface (C7) gery (B7) Gauge or Well Data (D9) rf. (B8) Other (Explain in Remarks)	Secondary Indicators (minimum of two requires Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imag.(C9) Stunted or Stressed Plants (D1) d Soils (C6) Year FAC-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of o ✓ Surface Water (A1)	S: One is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plower Thin Muck Surface (C7) Gauge or Well Data (D9) rf. (B8) Other (Explain in Remarks)	Secondary Indicators (minimum of two requires Surface Soil Cracks (B6) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imag.(C9) Stunted or Stressed Plants (D1) d Soils (C6)
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of or Image: 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 Imag Sparsely Vegetated Concave Sur Yeld Observations: Surface Water Present?	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plower Thin Muck Surface (C7) gery (B7) Gauge or Well Data (D9) rf. (B8) Yes X No Depth (inches):	
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c ✓ Surface Water (A1)	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plower Thin Muck Surface (C7) gery (B7) Gauge or Well Data (D9) rf. (B8) Other (Explain in Remarks) Yes X No Yes X No	Secondary Indicators (minimum of two requires Surface Soil Cracks (B6) □ Drainage Patterns (B10) □ Dry-Season Water Table (C2) □ Crayfish Burrows (C8) ving Roots (C3) □ Saturation Visible on Aerial Imag.(C9) □ Stunted or Stressed Plants (D1) d Soils (C6) ✓ Geomorphic Position (D2) ✓ FAC-Neutral Test (D5)
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of o ✓ 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 Imag Sparsely Vegetated Concave Sur <u>Yeld Observations:</u> Surface Water Present? Water Table Present? Saturation Present?	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Plowed Thin Muck Surface (C7) gauge or Well Data (D9) rf. (B8) Other (Explain in Remarks) Yes No Yes No Yes X Yes X Yes X Yes X Yes X	
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of o ✓ Surface Water (A1)	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Li Presence of Reduced Iron (C4) Recent Iron Reduction in Plower Thin Muck Surface (C7) gery (B7) Gauge or Well Data (D9) rf. (B8) Other (Explain in Remarks) Yes Yes Yes No Yes Yes No Yes Yes No Yes Yes No Yes	
YDROLOGY Wetland Hydrology Indicators Primary Indicators (minimum of or Image: Surface Water (A1) High Water Table (A2) Image: Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imag Sparsely Vegetated Concave Surfield Observations: Surface Water Present? Water Table Present? Saturation Present? Saturation Present? escribe Recorded Data (stream gauge)	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Plower Thin Muck Surface (C7) gery (B7) Gauge or Well Data (D9) rf. (B8) Other (Explain in Remarks) Yes Yes Yes No Depth (inches): Yes No Depth (inches): ge, monitoring well, aerial photos, previous inspections), if	
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of o ✓ Surface Water (A1)	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Plower Thin Muck Surface (C7) gery (B7) Gauge or Well Data (D9) rf. (B8) Other (Explain in Remarks) Yes No Yes No <td></td>	
YDROLOGY Vetland Hydrology Indicators Primary Indicators (minimum of c ✓ Surface Water (A1)	S: one is required; check all that apply) Water-Stained Leaves (B9) Aquatic Fauna (B13) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Lit Presence of Reduced Iron (C4) Recent Iron Reduction in Plower Thin Muck Surface (C7) gery (B7) Gauge or Well Data (D9) rf. (B8) Other (Explain in Remarks) Yes Yes Yes No Depth (inches): Yes X No Depth (inches): ge, monitoring well, aerial photos, previous inspections), if	

Sampling Point: S-38

Project/Site: Gretna Bottoms			City/County: Sarpy Cou			ty Sampling		Date:	4/30/20)15	
Applicant/Owner	Lyman-Riche	y Corporation			State	: NE	Sampling	Point:	S-39		
Investigators:	Ben Fisher	Austin Zig	ler		Section, Tov	wnship, Range	S 16	T 13N	R	10E	
Landform (hillslo	pe, terrace, etc.):	Depression			Local Re	lief (concave, c	onvex, non	e): N	one		
Slope(%): 1	Lat:	41.1028565254418	Long:	-96.29357034	91583	Datum:	NAD 1983				
Soil Map Unit Na	me: Gibbon lo	amy fine sand, overwash, o	ccasionally floo	oded		NWI Classifica	ation: Nor	ne			
Are climatic / hvo	Irologic conditions	on the site typical for this tin	ne of vear?	Yes X	No	(If No. exp	lain in Rem	arks)			
Are Vegetation	. Soil .	Hvdrology significa	ntly disturbed?	,	Are "Normal	Circumstances	" present?	Ýes	x	No	
Are Vegetation	, coil	Hydrology naturally	v problematic?		()(
	, com,				(If needed,	explain any an	swers in Re	emarks	·.)		
SUMMARY	OF FINDINGS	 Attach a site map s 	howing sar	npling poi	int locatio	ons, transec	ts, impo	rtant	featu	res, et	С.
Hydrophytic Ve	getation Present?	Yes X No	Is the S	ampled Area	1						
Hydric Soil Pre	sent?	Yes X No	within a	Wetland?		Yes	X No				
vvetiand Hydro	logy Present?	Yes <u>X</u> No							_		
Remarks:											
The area charac	cterized by this data	a form is a scrub-shrub wetl	and located on	fringes of a c	drainage ditcl	h. The area dis	played indic	cators	of hydro	phytic	
vegetation, nya		la hydrology.									
			Abcoluto	Dominant	Indicator						
VEGETATIO	N_ Use scient	ific names of plants.	<u>Absolute</u> <u>% Cover</u>	Species	Status	Dominance	Test Work	sheet			
Tree Stratum						Number of [Dominant S	pecies			
Shrub Stratur						That Are OE	BL, FACW,	or FAC	: _	4	(A)
Salix inte	rior (PIOT SIZ	e: <u>15Ft</u>)	30	v	FACW	Total Numbe	or of Domin	ont			
Cornus d	rummondii		10	Y	FAC	Species Acr	oss all Stra	anı ta:		4	(B)
			40	-Total Covo							_ `
Herb Stratum						Percent of D	ominant Sp	Decies		100.0%	(A/B)
Pholorie (e: <u>6 Ft</u>)	50	v	EAC)//	That Are OB	SL, FACVV, G	Jr FAC	:		= ' '
Rumex ci	rispus			- <u> </u>	FAC	Prevalence	Index Wor	kshee	t:		
Rumex a	Itissimus		10	N	FACW	Total %	Cover of:		Multi	ply by:	
Solidago	gigantea		10	N	FACW	OBL species	S	0	x 1 =	0	
Urtica dic	ica		10	Ν	FACW	FACW speci	ies	110	x 2 =	220	
			100	=Total Cover	r	FAC species	6	30	x 3 =	90	
Vine Stratum	_					FACU spec	ies	0	x 4 =	0	
							····	0	x 5 =	0	
							,	140	(A)	210	(B)
						Column Tota	als:	140	_(^) _	510	(D)
						Preval	lence Index	= B/A	=	2.21	
						Hydrophytic	Vegetation	n Indic	ators:		
						Rapid T	est for Hydi	rophyti	c Vegeta	ation	
						X Domina	nce Test >	50%			
						X Prevaler	nce Index ≤	3.0			
						Morphol	ogical Adap	otation	s (Prov	ide supp	orting
						data in F	Remarks or	on a s	eparate	sheet)	ũ
						Problem	natic Hydrop	ohytic \	/egetati	on (Exp	plain)
						Indicators of be present,	of hydric soi unless dist	l and w urbed	etland h or probl	vydrolog ematic.	y must
						Hydroph Vegetation	nytic Present?	Yes	x	No	
Domorkov (Inclu	do photo number-	hara ar an a concrete et	+)			-					
The area displa	yed dominant hydro	ophytic vegetation.	,								



Profile Descr	iption: (Des	cribe to the	depth ne	eeded to docur	nent the indi	icator or	confirm	the absence of Indicators.)	
Depth		Matrix			Redox Fe	atures			
(inches)	Color	(moist)	%	Color (mois	st) %	Type 1	Loc ²	Texture	Remarks
0 to 4	10YR	2/2	100					SANDY LOAM	
4 to 18	10YR	3/1	90	7.5YR 4/6	10	С	Μ	SANDY LOAM	
¹ Type: C=Con	centration, D	=Depletion,	RM=Red	luced Martix, CS	S=Covered or	r Coated S	Sand Gra	ins. 4Location: PL=Pore Lining,	√=Matrix.
Hydric Soil I	ndicators:							Indicators for Problematic Hy	dric Soils: ³
Histosol (A	1)			Sandy Gleye	ed Matrix (S4)			Coast Prairie Redox (A16)	
Histic Epipe	edon (A2)			Sandy Redo	x (S5)			Iron-Manganese Masses (F12)	
Black Histic	c (A3)			Stripped Ma	trix (S6)			Dark Surface (S7)	
Hydrogen S	Sulfide (A4)			Loamy Muck	y Mineral (F1)			Verv Shallow Dark Surface (TF	12)
Stratified La	ayers (A5)			Loamy Gleye	ed Matrix (F2)				,
2 cm Muck	(A10)			Depleted Ma	trix (F3)				
Depleted B	elow Dark Sur	face (A11)		Redox Dark	Surface (F6)				
Thick Dark	Surface (A12)			Depleted Da	rk Surface (F7)		3	
Sandy Muc	ky Mineral (S1)		Redox Depre	essions (F8)			 Indicators of hydrophytic vegeta wetland hydrology must be prese 	tion and nt. unless
5 cm Muck	y Peat or Peat	(S3)						disturbed or problematic	
C Restrict	ive Layer (i	f observe	d):						
Туре:								Hydria Soil Brocont?	
Depth (inch	nes):							Hydric Soli Flesent?	<u>,5 A NU</u>
The observed s	soil profile met	hydric soil cri	teria.						
HYDROLOG	Y								
Wetland Hyd	lrology Indi	cators:							
Primary Indic	ators (minim	um of one is	required	; check all that a	apply)			Secondary Indicators (minin	num of two required)
Surface Wa	ater (A1)			Water-S	ained Leaves	(B9)		Surface Soil Cracks	(B6)
High Water	Table (A2)			Aquatic F	Fauna (B13)			Drainage Patterns (B	10)
Saturation	(A3)			🗌 True Aqu	atic Plants (B1	14)		Dry-Season Water T	able (C2)
Water Mark	ks (B1)			Hydroge	n Sulfide Odor	(C1)		Crayfish Burrows (C8	3)
Sediment D	Deposits (B2)			Oxidized	Rhizospheres	along Livir	ng Roots (0	C3) Saturation Visible on	Aerial Imag.(C9)
Drift Depos	its (B3)			Presence	e of Reduced I	ron (C4)		Stunted or Stressed	Plants (D1)
Algal Mat o	or Crust (B4)			Recent li	on Reduction i	in Plowed S	Soils (C6)	Geomorphic Position	(D2)
Iron Depos	its (B5)		-		ck Surface (C7))		FAC-Neutral Test (D	5)
	VISIBle on Aeri	al Imagery (B	()		r well Data (D	9) vrko)			
	egetated Conc	ave Surf. (B8)			xpiain in Rema	irks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	!	No <u>X</u> D	epth (inches):				
Water Table	Present?	Yes		No <u>X</u> D	epth (inches):		•	Wetland Hydrology Present?	Ves X No
Saturation Pr		Yes	<u> </u>	טאט <u>D</u>	epun (inches):		3		
Describe Record	ded Data (strea	am gauge, mo	nitoring we	ell, aerial photos, j	previous inspec	ctions), if a	vailable:		
Remarks:	and the state of	- f							
The area displa	ayed indicators	of wetland hy	/arology.						

Project/Site:	Gretna Bottoms		City/Coun	ty:	Sarpy Cour	nty	Sampling Date	e: 4/30	/2015	
Applicant/Owner	r: Lyman-Riche	y Corporation			State	: NE	Sampling Poi	nt: S-4	0	
Investigators:	Ben Fisher	Austin Zigl	er		Section, Tov	wnship, Range	S16 T1	3N	R 10E	
Landform (hillslo	ope, terrace, etc.):	Hillslope			Local Re	lief (concave, c	onvex, none):	Conve	x	
Slope(%): 5	Lat:	41.1028862087787	Lona:	-96.29366891	67868	Datum:	NAD 1983			
Soil Map Unit Na	ame: Gibbon lo	amy fine sand overwash or		nded		NWI Classifica	tion: None			
Are climatic / by	drologic conditions	on the site typical for this tin	ne of vear?	Yes X	No	(If No. expl	lain in Remark	s)		
Are Vegetation	Soil	Hydrology significa	ntly disturbed?		re "Normal	(ii rto, oxp	" present?	Voc ¹	X No	
Are Vegetation	, Soil,	Hydrology, significa		, , , , , , , , , , , , , , , , , , ,		Circumstances	present:	103		
Are vegetation	, 5011,	nydrology, naturally	problematic?		(If needed,	explain any an	swers in Rema	arks.)		
SUMMARY	OF FINDINGS	 Attach a site map s 	howing sar	npling poi	nt locatio	ons, transec	ts, importa	int feat	tures, et	:C.
Hydrophytic Ve	egetation Present?	Yes X No	ls the S	ampled Area						
Hydric Soil Pre	esent?	Yes X No	within a Wetland?			Yes	X No			
Wetland Hydro	ology Present?	Yes X No								
Remarks:										
The area chara hydrophytic veg	cterized by this data getation, hydric soils	a form is a forested wetland s, and wetland hydrology crit	located along teria.	a drainage dit	ch south of I	Fairview Road.	The area disp	ayed inc	licators of	
VEGETATIC	DN _ Use scient	ific names of plants.	Absolute	Dominant	Indicator					
			<u>% Cover</u>	<u>Species</u>	<u>Status</u>	Dominance	Test Worksh	eet:		
Tree Stratum	<u>1</u> (Plot siz	e: <u>30 Ft</u>)				Number of E	Dominant Spec	ies	5	(A)
Populus	deltoides		60	Y	FAC			AC.		_ ()
			60	=Total Cover		Total Numbe	er of Dominant			
Shrub Stratu	<u>m</u> (Plot siz	e: <u>15Ft</u>)				Species Acro	oss all Strata:		5	(B)
Cornus o	drummondii		10	Y	FAC	- Porcont of D	ominant Spoo	ioc		
Salix inte	erior		5	Y	FACW	That Are OBL, FACW, or FAC:				_(A/B)
			15	=Total Cover						
Herb Stratum	<u>n</u> (Plot siz	e: <u>6 Ft</u>)				Prevalence	Index Works	ieet:		
Equisetu	ım hyemale		50	Y	FACW	Total %	Cover of:	M	ultiply by:	
Spartina	pectinata		30	Y	FACW	OBL species	0	x 1	= 0	
Partheno	ocissus quinquefolia		10	N	FACU	FACW speci	ies95	x 2	= 190	
Solidago	gigantea		10	N	FACW	FAC species	s <u>70</u>	x 3	= 210	
			100	=Total Cover		FACU spec	ies10	x 4	= 40	
Vine Stratum	<u>) </u>					UPL species	. 0	x 5	= 0	
						Column Tota	No: 17	 5 (A)	440	(B)
						Droval	115	(/	2.51	
						Fievai		J/A=	2.51	
						Hydrophytic	Vegetation In	dicators	\$:	
						Rapid To	est for Hydrop	nytic Veç	jetation	
						X Domina	nce Test > 50%	6		
						X Prevaler	nce Index ≤ 3.0)		
						Morphol	ogical Adaptat	ions (Pr	ovide supp	oorting
						data in F	Remarks or on	a separa	ate sheet)	nloin)
						Problem		lic veget	ation (Exp	piain)
						Indicators o be present,	f hydric soil ar unless disturb	d wetlan ed or pro	d hydrolog oblematic.	jy must
						Hydroph Vegetation I	nytic Present? γ	'es X	No	
Remarks: (Inclu	ude photo numbers	here or on a separate sheet	.)							
The area displa	ayed dominant hydr	ophytic vegetation.								



1 Jonth		Matrix		R	edox Fea	atures						
(inches)	Color	(moist)	%	Color (moist)	%	Type 1	Loc ²	Tex	ture		Rem	arks
) to 6	10YR	3/1	95	7.5YR 4/6	5	С	М	SANDY LOAM				
6 to 16	10YR	4/2	95	7.5YR 4/6	5	С	М	SANDY LOAM				
6 to 18	10YR	2/1	98	7.5YR 4/6	2	С	М	SANDY CLAY	LOAM			
Гуре: C=Con	centration, D	D=Depletion,	RM=Redu	uced Martix, CS=Co	overed or	Coated S	Sand Gra	ins. ² Loc	ation: PL=Pore I	Lining, M=	Matrix.	
lydric Soil I	ndicators:							Indicator	rs for Problema	atic Hydri	c Soils	3
Histosol (A	1)			Sandy Gleyed Ma	atrix (S4)			Coas	t Prairie Redox (A	16)		
Histic Epipe	edon (A2)			Sandy Redox (S5	5)			☐ Iron-I	Manganese Masse	es (F12)		
Black Histic	c (A3)			Stripped Matrix (S	S6)				Surface (S7)	()		
Hydrogen S	Sulfide (A4)			Loamy Mucky Mir	neral (F1)							
Stratified La	ayers (A5)			Loamy Gleyed Ma	atrix (F2)			U Very	Shallow Dark Surf	ace (TF12)		
2 cm Muck	(A10)			Depleted Matrix (F3)			U Othe	r (Explain in Rema	ırks)		
Depleted B	elow Dark Sur	face (A11)		Redox Dark Surfa	ace (F6)							
Thick Dark	Surface (A12)			Depleted Dark Su	urface (F7))						
	ky Mineral (S1	, 1)			ana (E9)	/		³ Indica	ators of hydrophytic	c vegetation	and	
		() (C2)			nis (fo)			wetland	d hydrology must b	be present, ι blematic	inless	
		(SS)	al).							biomatio.		
	ive Layer (ir observe	a):									
Depth (inch	10c).							Hydric Soi	I Present?	Yes	Х	No
YDROLOG Vetland Hyd	Y Irology Indi	icators:										
YDROLOG Vetland Hyd Primary Indic	Y Irology Indi ators (minim	icators: um of one is	s required;	check all that apply	()			Seco	ondary Indicators	s (minimun	n of two	requirec
YDROLOG Vetland Hyd Primary Indic	Y Irology Indi ators (minim ater (A1)	icators: um of one is	s required;	check all that apply	γ) d Leaves ((B9)		Seco	ondary Indicators	s (minimur Cracks (B6)	n of two	requirec
YDROLOG /etland Hyd Primary Indic Surface Wa High Water	Y Irology Indi ators (minim ater (A1) Table (A2)	icators: um of one is	s required;	check all that apply	y) d Leaves (a (B13)	(B9)		Seco	ondary Indicators	s (minimur Cracks (B6) tterns (B10)	n of two	required
YDROLOG Vetland Hyd Primary Indic Surface Wa High Water Saturation (Y Irology Indi ators (minim ater (A1) · Table (A2) (A3)	icators: um of one is	s required;	check all that apply	/) d Leaves (a (B13) Plants (B1	(B9)		Seco	ondary Indicators	s (minimun Cracks (B6) tterns (B10) Water Table	n of two	required
YDROLOG Vetland Hyd Primary Indic Surface Wa High Water Saturation (Water Mark	Trology Indi ators (minim ater (A1) Table (A2) (A3) (S (B1)	icators: um of one is	s required;	check all that apply U Water-Stained Aquatic Fauna True Aquatic I	y) d Leaves (a (B13) Plants (B1 Ifide Odor	(B9) 4) (C1)		Secc	ondary Indicators	s (minimun Cracks (B6) tterns (B10) Water Table rows (C8)	n of two	required
Z DROLOG Zetland Hyd Primary Indic Surface Wa High Water Saturation (Water Mark Sediment D	Y Irology Indi ators (minim ater (A1) Table (A2) (A3) (A3) (ss (B1) Deposits (B2)	icators: um of one is	s required;	check all that apply U Water-Stained Aquatic Fauna True Aquatic Hydrogen Sul Oxidized Rhiz	y) d Leaves (a (B13) Plants (B1 fide Odor (cospheres	(B9) 4) (C1) along Livir	ng Roots (C	<u>Secc</u>	ondary Indicators	s (minimun Cracks (B6) tterns (B10) Water Table rows (C8) isible on Ae	n of two (C2) ial Imag	required
Yetland Hyd Primary Indic Surface Wa High Water Saturation (Water Mark Sediment D Drift Depos	Y Irology Indi ators (minim ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (A3) (A3) (A3	icators: um of one is	s required;	check all that apply Water-Stained Aquatic Fauna True Aquatic F Hydrogen Sul Oxidized Rhiz Presence of F	y) d Leaves (a (B13) Plants (B1 lifide Odor cospheres Reduced Ir	(B9) 4) (C1) along Livir ron (C4)	ng Roots (C	Secc	ondary Indicators Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S	s (minimun Cracks (B6) tterns (B10) Water Table rows (C8) isible on Ae tressed Plan	n of two (C2) rial Imag	required
Z DROLOG Yetland Hyd Irimary Indic Surface Wa High Water Saturation (Water Mark Sediment D Drift Depos Algal Mato	Y Irology Indi ators (minim ater (A1) Table (A2) (A3)	icators: um of one is	s required;	check all that apply Water-Stainer Aquatic Fauna True Aquatic F Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R	/) d Leaves (a (B13) Plants (B1 fide Odor cospheres Reduced Ir Reduced Ir	(B9) 4) (C1) along Livir ron (C4) n Plowed S	ng Roots (C Soils (C6)	Secc 23)	ondary Indicators Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic	s (minimun Cracks (B6) tterns (B10) Water Table rows (C8) isible on Ae tressed Plan Position (D)	n of two e (C2) rial Imag nts (D1) 2)	required
/ DROLOG / etland Hyd 'rimary Indic Surface Wa High Water Saturation (Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi	Y Irology Indi ators (minim ater (A1) Table (A2) (A3) (A5	icators: um of one is	s required;	check all that apply U Water-Stained Aquatic Fauna True Aquatic I Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su	y) d Leaves (a (B13) Plants (B1 lfide Odor (cospheres Reduced Ir Reduced Ir Reduced (C7)	(B9) 4) (C1) along Livir on (C4) n Plowed S	ng Roots (C Soils (C6)	<u>Secc</u> 33)	Dindary Indicators Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation V Stunted or S Geomorphic FAC-Neutral	s (minimun Cracks (B6) tterns (B10) Water Table rows (C8) isible on Ae tressed Plar Position (D2 Test (D5)	e (C2) rial Imag nts (D1) 2)	o required
Z DROLOG Yetland Hyd Trimary Indic Surface Wa High Water Saturation (Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi Inundation Sparsely Vol	Y Irology Indi ators (minim ater (A1) Table (A2) (A3)	icators: um of one is ial Imagery (B cave Surf. (B8	s required;	check all that apply U Water-Stainer Aquatic Fauna True Aquatic Fauna Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain	/) d Leaves (a (B13) Plants (B1 fide Odor cospheres Reduced Ir Reduced Ir Reduced Ir Reduced Ir action in reduced Ir Cospheres Reduced Ir Cospheres Reduced Ir Cospheres Reduced Ir Cospheres Reduced Ir Cospheres Reduced Ir Cospheres Reduced Ir Reduced I Reduced I Reduce	(B9) 4) (C1) along Livir on (C4) n Plowed S) 9) rks)	ng Roots (C Soils (C6)	<u>Secc</u> 23)	ondary Indicators Surface Soil Drainage Pa Dry-Season Crayfish Burn Saturation Vi Stunted or S Geomorphic ▼ FAC-Neutral	s (minimun Cracks (B6) tterns (B10) Water Table rows (C8) isible on Ae tressed Plan Position (D2 Test (D5)	n of two e (C2) rial Imag nts (D1) 2)	required
YDROLOG Vetland Hyd Primary Indic Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi Inundation Sparsely Valence	Y Irology Indi ators (minim ater (A1) Table (A2) (A3) (A4) (A4) (A4) (A4) (A5) (icators: um of one is ial Imagery (B cave Surf. (B8	s required; 37)	check all that apply U Water-Stained Aquatic Fauna True Aquatic Fauna Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain	y) d Leaves (a (B13) Plants (B1 fide Odor (cospheres Reduced Ir Reduction in Reduction in aufface (C7) ell Data (D9 n in Rema	(B9) 4) (C1) along Livir on (C4) n Plowed S) 9) rks)	ng Roots (C Soils (C6)	<u>Secc</u> 33)	Ondary Indicators Surface Soil Drainage Pa Dry-Season Crayfish Buri Saturation Vi Stunted or S Geomorphic YAC-Neutral	s (minimun Cracks (B6) tterns (B10) Water Table rows (C8) isible on Ae tressed Plan Position (D2 Test (D5)	n of two (C2) rial Imag nts (D1) 2)	(C9)
	Y Irology Indiators (minim ater (A1) Table (A2) (A3) (A4) (A) (A) (A) (A) (A) (A) (A) (A	icators: um of one is ial Imagery (B cave Surf. (B8	5 required; 57))	check all that apply U Water-Stained Aquatic Fauna True Aquatic Fauna Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Gauge or We Other (Explain No _X_ Depth	/) d Leaves (a (B13) Plants (B1 fide Odor of cospheres Reduced Ir Reduced Ir Reduction in urface (C7) ell Data (DS n in Rema (inches):	(B9) 4) (C1) along Livir on (C4) n Plowed S) 9) rks)	ng Roots (C Soils (C6)	Secc	ondary Indicators Surface Soil Drainage Pa Dry-Season Crayfish Burn Saturation Vi Stunted or S Geomorphic ▼ FAC-Neutral	s (minimun Cracks (B6) tterns (B10) Water Table rows (C8) isible on Ae tressed Plan Position (D2 Test (D5)	n of two e (C2) rial Imag nts (D1) 2)	.(C9)
YDROLOG Vetland Hyd Primary Indic Surface Wa High Water Saturation Water Mark Sediment D Drift Depos Algal Mat o Iron Deposi Inundation Sparsely Wa ield Observ Water Table	Y Irology Indi ators (minim ater (A1) Table (A2) (A3) (A) (A) (A) (A) (A) (A) (A) (A	icators: ium of one is ial Imagery (B cave Surf. (B8 Yes Yes	5 required; 37)) N	check all that apply Water-Stained Aquatic Fauna True Aquatic I Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth o X	y) d Leaves (a (B13) Plants (B1 lfide Odor (cospheres Reduced Ir Reduced Ir Reduction in urface (C7) ell Data (DS n in Rema (inches): (inches):	(B9) 4) (C1) along Livir ron (C4) n Plowed S) 9) rks)	ng Roots (C Soils (C6)	<u>Secc</u>	Drdary Indicators Surface Soil Drainage Pa Dry-Season Crayfish Bur Saturation Vi Stunted or S Geomorphic FAC-Neutral	s (minimun Cracks (B6) tterns (B10) Water Table rows (C8) isible on Ae tressed Plan Position (D2 Test (D5)	e (C2) rial Imag nts (D1) 2)	.(C9)
YDROLOG Vetland Hyd Primary Indic Surface Wa High Water Saturation (Water Mark Sediment D Drift Depos Algal Mat o Iron Depos Inundation Sparsely Ve ield Observ Surface Water Water Table Saturation Pr	Y Irology Indi ators (minim ater (A1) Table (A2) (A3) (A3) (A3) (A3) (A3) (Case of the second (A3) (A4) (A4) (A5) (A4) (A5	icators: ium of one is ial Imagery (B cave Surf. (B8 Yes Yes Yes	57)) N N N	check all that apply Water-Stained Aquatic Fauna True Aquatic I Hydrogen Sul Oxidized Rhiz Presence of R Recent Iron R Thin Muck Su Gauge or We Other (Explain No X Depth o X Depth	y) d Leaves (a (B13) Plants (B1 fide Odor cospheres Reduced Ir Reduced Ir Reduction in urface (C7) ell Data (DS n in Rema (inches): (inches): (inches):	(B9) 4) (C1) along Livir on (C4) n Plowed S) 9) rks)	ng Roots (C Soils (C6)	Secc	Dindary Indicators	s (minimun Cracks (B6) tterns (B10) Water Table rows (C8) isible on Ae tressed Plan Position (D2 Test (D5)	n of two (C2) rial Imag nts (D1) 2) YesX	.(C9)
	Y Irology Indi ators (minim ater (A1) Table (A2) (A3) (A4) (A) (A4) (A4) (A) (A) (A4) (A4) (A) (A4) (A4) (A) (A) (A) (A) (A) (A) (A) (A	icators: ium of one is ial Imagery (B cave Surf. (B8 Yes Yes Yes am gauge, mo	5 required; 57) 	check all that apply Water-Stainer Aquatic Fauna True Aquatic Fauna True Aquatic I Hydrogen Sul Oxidized Rhiz Presence of F Recent Iron R Thin Muck Su Gauge or We Other (Explain o X Depth I, aerial photos, previo	y) d Leaves (a (B13) Plants (B1 fide Odor (cospheres Reduced Ir Reduced Ir Reduction in urface (C7) ell Data (D9 n in Rema (inches): (inches): (inches): (inches):	(B9) 4) (C1) along Livir on (C4) n Plowed S) 9) rks) ctions), if av	ng Roots (C Soils (C6) 4 vailable:	Secc	Dindary Indicators	s (minimun Cracks (B6) tterns (B10) Water Table rows (C8) isible on Ael tressed Plan Position (D2 Test (D5)	n of two e (C2) rial Imag nts (D1) 2) YesX	.(C9)
Project/Site:	Gretna Bottoms			City/Cour	ity:	Sarpy Cour	nty	Sampling Da	ate:	4/30/20	15	
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Applicant/Owner:	Lyman-Riche	y Corporation				State	: NE	Sampling P	oint:	S-41		
Investigators:	Ben Fisher	Au	stin Zigler			Section, Tov	wnship, Range	S 16 T	13N	R	10E	
Landform (hillslop	be, terrace, etc.):	Depression				Local Rel	lief (concave, c	onvex, none)): Nc	one		
Slope(%): 0	Lat:	41.101979177023	6	Long:	-96.293513208	80851	Datum:	NAD 1983				
Soil Map Unit Nar	me: Gibbon lo	amy fine sand, over	wash, occa	sionally floo	oded		NWI Classifica	ation: None	;			
Are climatic / hyd	rologic conditions	on the site typical fo	r this time o	of year?	Yes X	No	(If No, exp	lain in Rema	rks)			
Are Vegetation	, Soil,	Hydrology, s	significantly	v disturbed?	? A	Are "Normal	Circumstances	" present?	Yes	Х	No	
Are Vegetation	, Soil,	Hydrology, r	naturally pr	oblematic?		(If needed,	explain any an	swers in Rer	narks	.)		
SUMMARY		- Attach a site i	nan sho	wing sa	mplina poi	nt locatio	ons, transec	ts. impor	tant	, featu	es. et	C.
Hydrophytic Veg	getation Present?	Yes No	X					,			,	••
Hydric Soil Pres	sent?	Yes No	Х	Is the S	ampled Area				v			
Wetland Hydrole	ogy Present?	Yes No	Х	within a			Yes	No	<u>X</u>			
Remarks:												
The area charac indicators of hyd	terized by this dat lrophytic vegetatio	a form is an upland a n, hydric soils, and v	area locate vetland hyd	d adjacent Irology.	to the wetlands	s characteriz	zed in S-39 and	d S-40. The a	irea fa	iled to	display	
VEGETATIO	N- Use scient	ific names of pla	nts.	Absolute % Cover	Dominant Species	Indicator Status	Deminence		h			
Tree Stratum				<u>/// 00101</u>	opecies	<u>otatus</u>	Dominance	Iest Works	neet:			
Chrub Strotum							That Are OE	BL, FACW, o	r FAC	: _	1	(A)
Saliv inter	ior (Plot siz	e: <u>15Ft</u>)		5	Y	FACW/	Total Numbe	or of Domino	nt			
				5	-Total Cover	17.000	Species Acr	oss all Strata	11. 1:		2	(B)
Herb Stratum	(Plot siz	o: 6 Et)										_
Bromus in	nermis	e. <u>on</u>)		90	Y	FACU	Percent of D That Are OB	ominant Spe BL, FACW, or	cies FAC:		50.0%	(A/B)
Solidago g	gigantea			2	Ν	FACW		· · ·				
				92	=Total Cover		Prevalence	Index Work	sheet	:		
Vine Stratum	_						Total %	Cover of:		Multi	ply by:	
							OBL species	S	J 	_ X I = _	24	
							FACW spec	ies	<u>′</u>	×2= ×2=	0	
							FAC species	s	<u> </u>	× 4 =	360	
							FACU spec	ies	0	×4= ×5-	0	
							UPL species	·	5	× J =	0	
							Column Tota	als:1	07	(A)	394	<u>(</u> B)
							Preval	lence Index =	= B/A=	-	3.68	
							Hydrophytic	Vegetation	Indica	ators:		
							Rapid T	est for Hydro	phytic	: Vegeta	ation	
							Domina	nce Test > 5	0%			
							Prevaler	nce Index ≤ 3	3.0			
							Morphol	logical Adapt	ations	(Provi	de supp	orting
							data in F Problem	Remarks or c	n a se wtic V	eparate egetati	sheet) on (Exr	olain)
							Indicators of be present,	of hydric soil a unless distu	and wa	etland h	ydrolog ematic.	y must
							Hydroph Vegetation	hytic Present?	Yes		No)	ĸ
Remarks: (Includ	de photo numbers	here or on a separa	te sheet.)				<u> </u>					
The area fails to	meet hydrophytic	vegetation criteria.										



Profile Descr	iption: (Des	cribe to the	depth nee	eded to document	the indi	cator or	confirm t	the absence of Indicators.)	
Depth		Matrix		R	edox Fea	atures			
(inches)	Color	(moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 12	10YR	3/1	100					SANDY LOAM	
12 to 16	10YR	2/1	100					SANDY LOAM	
16 to 18	10YR	2/1	75					SANDY LOAM	Mixed Matrix
16 to 18	10YR	4/1	20	7.5YR 4/6	5	С	М	SANDY LOAM	Mixed Matrix
¹ Type: C=Cor	centration, D	=Depletion,	RM=Redu	iced Martix, CS=Co	overed or	Coated S	Sand Gra	ins. ² Location: PL=Pore Lir	ning, M=Matrix.
Hydric Soil I	Indicators:							Indicators for Problemat	ic Hydric Soils: ³
Histosol (A	.1)			Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A16	;)
Histic Epip	edon (A2)			Sandy Redox (S5	5)				(F12)
Black Histi	c (A3)			Stripped Matrix (S	6)				()
Hydrogen	Sulfide (A4)			Loamy Mucky Mi	neral (F1)				
Stratified L	avers (A5)			Loamv Gleved Ma	atrix (F2)			Very Shallow Dark Surfac	ce (TF12)
2 cm Muck	(A10)			Depleted Matrix (F3)			Other (Explain in Remark	s)
	elow Dark Sur	face (A11)		Bedox Dark Surf:	(F6)				
Thick Dark	Surface (A12)								
	Ninorol (S1	`	1					³ Indicators of hydrophytic v	regetation and
)	l	Redox Depressio	ns (⊢8)			wetland hydrology must be	present, unless
	y Peat or Peat	(83)							
	ive Layer (i	f observe	d):						
I ype:								Hydric Soil Present?	Yes No X
Depth (Incl Remarks:	les).								
The observed	soil profile faile	d to display in	ndicators of I	hydric soil.					
HYDROLOG	Ϋ́Υ								
Wetland Hy	drology Indi	cators:							
Primary Indic	ators (minim	um of one is	required;	check all that apply	')			Secondary Indicators ((minimum of two required)
Surface W	ater (A1)		-	Water-Staine	d Leaves (B9)		Surface Soil C	racks (B6)
High Wate	r Table (A2)			Aquatic Fauna	a (B13)	- /		Drainage Patte	erns (B10)
Saturation	(A3)			True Aquatic	Plants (B1	4)		Dry-Season W	ater Table (C2)
U Water Mar	ks (B1)			Hydrogen Sul	fide Odor ((C1)		Crayfish Burro	ws (C8)
Sediment I	Deposits (B2)			Oxidized Rhiz	ospheres	along Livir	ng Roots (C	C3) Saturation Visi	ble on Aerial Imag.(C9)
Drift Depos	sits (B3)			Presence of F	Reduced In	on (C4)		Stunted or Stre	essed Plants (D1)
Algal Mat o	or Crust (B4)			Recent Iron R	eduction i	n Plowed S	Soils (C6)	Geomorphic Po	osition (D2)
Iron Depos	sits (B5)			🗌 Thin Muck Su	Irface (C7))		FAC-Neutral T	est (D5)
Inundation	Visible on Aeri	al Imagery (B	57)	Gauge or We	ll Data (D9	9)			
Sparsely V	egetated Conc	ave Surf. (B8)	Other (Explain	n in Rema	rks)			
Field Observ	ations:								
Surface Wat	er Present?	Yes	N	o <u>X</u> Depth	(inches):				
Water Table	Present?	Yes	N	o <u>X</u> Depth	(inches):				
Saturation P	resent?	Yes	N	o X Depth	(inches):			Wetland Hydrology Prese	nt? Yes <u>No X</u>
Describe Recor	ded Data (strea	am gauge, mo	onitoring wel	l, aerial photos, previo	ous inspec	tions), if a	vailable:		
Remarks									
The area failed	d to meet wetla	nd hydrology	criteria. The	area is elevated abov	ve the adja	acent wetla	and.		

Project/Site:	Gretna Bottoms		City/Cour	nty:	Sarpy Cour	nty S	Sampling Date	: 4/30/2	2015	
Applicant/Owner:	Lyman-Riche	y Corporation			State	E NE	Sampling Poir	nt: S-42	:	
Investigators:	Ben Fisher	Austin Z	Zigler		Section, To	wnship, Range	S 16 T 1	3N F	10E	
Landform (hillslop	be, terrace, etc.):	Hillslope			Local Re	lief (concave, co	nvex, none):	Convex		
Slope(%): 2	Lat:	41.0994645447108	Long:	-96.29323250	85731	Datum: N	NAD 1983			
Soil Map Unit Nar	me: Gibbon lo	amy fine sand, overwash.	. occasionally flo	oded		NWI Classificati	on: None			
Are climatic / hvdi	rologic conditions	on the site typical for this	time of vear?	Yes X	No	(If No. expla	in in Remarks	5)		
Are Vegetation	Soil	Hydrology signifi	icantly disturbed	?	Are "Normal	Circumstances"	present?	., (es X	No	
Are Vegetation	, Coil,	Hydrology, signin	ally problematic?	·						
Are vegetation	, 3011,	Tiyurology, Tatura	any problematic?		(If needed,	explain any ans	wers in Rema	rks.)		
SUMMARY C	OF FINDINGS	 Attach a site map 	showing sa	mpling poi	nt locatio	ons, transect	s, importa	nt feat	ures, et	i C.
Hydrophytic Veg	getation Present?	Yes X No	Is the S	Sampled Area						
Hydric Soil Pres	sent?	Yes No X	within	a Wetland?		Yes	No	х		
Wetland Hydrolo	ogy Present?	Yes No X						<u> </u>		
Remarks:										
The area charac indicators of hyd	terized by this data Iric soil and wetlan	a form is an upland forest d hydrology; however, the	ed area east of t area met hydro	the emergent w phytic vegetati	vetland chara on criteria.	acterized by S-3	8. The area fa	ailed to di	isplay	
VEGETATIO	N_ Use scient	ific names of plants.	Absolute % Cover	Dominant Species	Indicator Status					
Tree Stratum				Species	Status	Dominance 1	est Workshe	et:		
Populus d	(PIOT SIZ) leltoides	e: <u>30 Ft</u>)	70	Y	FAC	That Are OBL	, FACW, or F	AC:	3	(A)
			70	=Total Cover		Total Number	of Dominant			
Shrub Stratum	<u>n</u> (Plot size	e: 15Ft)				Species Acros	ss all Strata:		4	(B)
Cornus dr	ummondii		2	Ν	FAC			-		
Llorh Strotum	(5)		2	=Total Cover		Percent of Do That Are OBL	minant Speci , FACW, or F	əs AC: –	75.0%	_(A/B)
Remus in	(Plot size	e: <u>6Ft</u>)	20	V		Prevalence li	ndex Worksh	eet:		
Bromus In	neie			- <u>Y</u>	FACU	Total % C	over of:	Mu	Itiply by:	
Solidago	nigantea				FACW	OBL species	0	x 1 :	= 0	
Equisetum	n hvemale		10	N	FACW	EACW specie	s 30	x 2	= 60	
Parthenoc	cissus quinquefolia		10	N	FACU		102	x 3	= 306	
			100	=Total Cover			40	x 4	= 160	
Vine Stratum			· · · · · · · · · · · · · · · · · · ·			FACU specie	s <u>10</u>		- 0	
	_					UPL species	0		= 0	
						Column Total	s:172	2(A)	526	(B)
						Prevale	nce Index = E	3/A=	3.06	
						Hydrophytic \	/egetation In	dicators		
						Rapid Te	st for Hydroph	vtic Vea	etation	
							$r_{0} = T_{0} r_{0} + 50\%$	//////////////////////////////////////	Jacon	
							$\frac{1}{2} = \frac{1}{2} = \frac{1}$, ,		
						Prevalence				
						data in Ro	gical Adaptati emarks or on tic Hydrophyt	ons (Pro a separation of the s	vide supp te sheet)	oorting
						Indicators of	hydric soil an	d wetland	l hydrolog	jy must
						be present, u	niess aisturb	a or prol	piematic.	
						Vegetation P	resent? Y	es X	No	
Remarks: (Includ	de photo numbers	here or on a separate she	eet.)			1				
The area is dom	inated by hydrophy	ytic vegetation.								



Profile Descript	tion: (Des	cribe to the	depth nee	eded to documen	t the indi	cator or	confirm t	the absence of Indicators.)	
Depth		Matrix		F	Redox Fea	atures			
(inches)	Color	(moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 12	10YR	4/2	100					SAND	
12 to 18	10YR	4/2	78	7.5YR 4/6	2	С	М	SAND	
12 to 18	10YR	5/1	20					SAND	
¹ Type: C=Conce	entration, D	=Depletion,	RM=Redu	iced Martix, CS=C	overed or	Coated S	Sand Grai	ins. ² Location: PL=Pore Linir	ıg, M=Matrix.
Hydric Soil Inc	licators:							Indicators for Problematic	Hydric Soils: ³
Histosol (A1)			[Sandy Gleyed M	atrix (S4)			Coast Prairie Redox (A16)	
Histic Epipedo	on (A2)		[Sandy Redox (S	5)				12)
Black Histic (A	A3)		[Stripped Matrix (S6))
Hydrogen Sul	fide (A4)		[Loamy Mucky M	ineral (F1)			Dark Surface (S7)	
Stratified Lave	ers (A5)		[Loamv Gleved N	latrix (F2)			Very Shallow Dark Surface	(TF12)
	.10)		[(E2)			Other (Explain in Remarks)	
		face (A11)	l ſ		(F3)				
	JW Dark Sur	lace (ATT)	l	Redox Dark Surf	ace (F6)				
	urface (A12)		l	Depleted Dark S	urface (F7)			³ Indicators of hydrophytic ver	netation and
Sandy Mucky	Mineral (S1)	l	Redox Depression	ons (F8)			wetland hydrology must be pr	esent, unless
5 cm Mucky F	Peat or Peat	(S3)						disturbed or problem	atic.
	e Layer (i	f observed	:):						
Туре:								Hydric Soil Present?	Yes No X
Depth (inches	s):								
HYDROLOGY Wetland Hydro Primary Indicate	ology Indi	cators:	required:	check all that appl	V)			Secondary Indicators (m	inimum of two required)
			required,		y)				
U Surface Wate	r (A1)					D9)			JKS (D0)
					Diante (B1	4)		Drainage Fallen	s (BT0) er Table (C2)
	3) (P1)				Ifide Odor	4) (C1)			(C8)
						along Livir	a Roots (C	C3) Saturation Visible	e on Aerial Imag (C9)
Drift Deposits	(B3)			Presence of	Reduced Ir	on (C4)	ig 10010 (C	Stunted or Stress	sed Plants (D1)
Algal Mat or C	Crust (B4)			Recent Iron F	Reduction i	n Plowed S	Soils (C6)		ition (D2)
Iron Deposits	(B5)			Thin Muck S	urface (C7))	()	FAC-Neutral Tes	t (D5)
Inundation Vis	sible on Aeri	al Imagery (B	7)	Gauge or We	ell Data (D	9)			
Sparsely Vege	etated Conc	ave Surf. (B8)		Other (Expla	in in Rema	rks)			
Field Observat	ions:								
Surface Water I	Present?	Yes	N	o <u>X</u> Depth	(inches):				
Water Table Pre	esent?	Yes	N	o <u>X</u> Depth	(inches):				
Saturation Pres	ent?	Yes	N	o <u>X</u> Depth	(inches):			Wetland Hydrology Present	? Yes <u>No X</u>
Describe Recorded	d Data (strea	am gauge, mo	nitoring wel	I, aerial photos, previ	ious inspec	ctions), if a	vailable:		
Remarks: The area failed to	o meet wetla	nd hydrology (criteria.						

Project/Site: Gretn	a Bottoms		City/Count	ty:	Sarpy Cour	nty Sa	ampling Date:	4/30/2	.015	
Applicant/Owner: I	Lyman-Richey	Corporation			State	NE S	ampling Point	: S-43		
Investigators: Ben	Fisher	Austin Z	igler	:	Section, Tov	wnship, Range	S 16 T 13	N R	10E	
Landform (hillslope, ter	rrace, etc.):	Hillslope			Local Re	lief (concave, con	ivex, none):	Convex		
Slope(%): 2	Lat:	41.0975451439107	Long: -	-96.29295902 [,]	12885	Datum: N	AD 1983			
Soil Map Unit Name:	Gibbon loa	my fine sand, overwash.	occasionally floo	oded		NWI Classificatio	on: None			
Are climatic / hydrologi	ic conditions c	on the site typical for this t	time of year?	Yes X	No	(If No. explai	n in Remarks)			
Are Vegetation	Soil	Hydrology signific	cantly disturbed?	A	Are "Normal	Circumstances" r	present? Ye	es X	No	
Are Vegetation	, coil,	Hydrology, eigning	lly problematic?	,						
	, 3011,	, natura			(If needed,	explain any answ	vers in Remar	KS.)		
SUMMARY OF F	INDINGS -	Attach a site map	showing sar	npling poir	nt locatio	ons, transects	s, importar	it featu	ires, et	ic.
Hydrophytic Vegetati	on Present?	Yes X No	Is the S	ampled Area						
Hydric Soil Present?		Yes No X	within a	Wetland?		Yes	No X	Ĺ		
Wetland Hydrology P	resent?	Yes No X	_							
Remarks:										
The area characterize	ed by this data	form is an upland foreste	ed area east of th	ne emergent w	etland chara	acterized by S-38	. The area fa	led to dis	splay	
		r nydrology, nowever, me	area met nyurop	nylic vegetati	on chiena.					
			Abcoluto	Dominant	Indicator					
VEGETATION_	Use scienti	fic names of plants.	<u>% Cover</u>	Species	Status	Dominance Te	est Workshee	et:		
Tree Stratum	(Plot size	e: 30 Ft)				Number of Do	minant Specie	es		
Populus deltoide	es	<u> </u>	70	Y	FAC	That Are OBL	, FACW, or FA	\C:	3	(A)
			70	=Total Cover		Total Number	of Dominant			
Shrub Stratum	(Plot size	• 15Ft)				Species Acros	s all Strata:		5	(B)
Juniperus virgin	iana	<u> </u>	5	Y	FACU			_		_
			5	=Total Cover		Percent of Dor	ninant Specie	s C	60.0%	(A/B)
Herb Stratum	(Plot size	e 6 Ft)				That Are ODE,		0.		
Carex festucace	ea		30	Y	FACW	Prevalence In	dex Workshe	et:		
Bromus inermis			20	Y	FACU	Total % Co	over of:	Mult	tiply by:	
Elymus virginicu	ıs		20	Y	FACW	OBL species	0	x 1 =	: 0	
Bouteloua dacty	/loides		10	N	FACU	FACW species	65	x 2 =	: 130	
Bromus hordead	ceus		10	Ν	UPL	FAC species	82	x 3 =	246	
Rumex crispus			10	<u>N</u>	FAC	FACU species	35	x 4 =	: 140	
Solidago gigante	ea		10	N	FACW	UPL species	15	x 5 =	: 75	
Descurainia inca	ana		5	N			197	(A)	591	(B)
Cornus drummo	ndii		2	N	FAC	Column Totals		((_)
			122	-Total Cover		Prevaler	nce Index = B/	A=	3.00	
Vine Stratum						Hydrophytic V	egetation Ind	icators:		
<u>vine olicitani</u>						Rapid Tes	t for Hydrophy	tic Vege	tation	
						X Dominanc	e Test > 50%			
						X Prevalence	e Index ≤ 3.0			
						Morpholog	jical Adaptatio	ns (Prov	vide supp	porting
						data in Re	marks or on a	separate	e sheet)	
						Problemat	ic Hydrophytic	; vegetat	ion (Ex	plain)
						Indicators of h be present, ur	nydric soil and nless disturbe	wetland d or prob	hydrolog lematic.	gy must
						Hydrophy Vegetation Pr	tic esent? Ye	s X	No	
Remarks: (Include pho	oto numbers h	nere or on a separate she	et.)			1				
The area is dominated	a by hydrophy	tic vegetation.								



Profile Descr	iption: (Desc	ribe to the	depth nee	eded to document	the indi	cator or	confirm t	he absence of Indicators.)	
Depth		Matrix		R	edox Fea	atures			
(inches)	Color	(moist)	%	Color (moist)	%	Type 1	Loc ²	Texture	Remarks
0 to 8	10YR	4/2	100					SANDY LOAM	
8 to 16	10YR	3/1	100					LOAMY SAND	
16 to 18	10YR	3/1	80					LOAMY SAND	Mixed Matrix
16 to 18	10YR	5/1	15	7.5YR 4/6	5	С	М	LOAMY SAND	Mixed Matrix
¹ Type: C=Cor	centration, D	=Depletion,	RM=Redu	iced Martix, CS=Co	overed or	Coated S	Sand Grai	ns. ² Location: PL=Pore Lining	, M=Matrix.
Hydric Soil I	indicators:							Indicators for Problematic H	Hydric Soils: ³
Histosol (A	.1)		[Sandy Gleyed Ma	atrix (S4)			Coppt Brairia Boday (A16)	
Histic Epipe	edon (A2)		[Sandy Redox (St	5)				2)
Black Histi	c (A3)		[Stripped Matrix (56)				2)
	Sulfide (A4)		[Loamy Mucky Mi	neral (F1)			Dark Surface (S7)	
	avers $(\Delta 5)$		[atrix (E2)			Very Shallow Dark Surface (1	ΓF12)
			ſ					Other (Explain in Remarks)	
	(ATU)	<i></i>	l	Depleted Matrix (F3)				
Depleted B	elow Dark Surf	ace (A11)	l	Redox Dark Surface	ace (F6)				
Thick Dark	Surface (A12)		l	Depleted Dark S	urface (F7)			3 Indiantara of hydrophytic year	atation and
Sandy Muc	ky Mineral (S1))	[Redox Depression	ons (F8)			wetland hydrology must be pres	sent, unless
5 cm Muck	y Peat or Peat	(S3)						disturbed or problema	tic.
Restrict	ive Layer (i	f observed	d):						
Туре:								Hydric Soil Present?	Ves No X
Depth (incl	nes):							Hyune Son Tresent:	
	· V								
Wetland Hyd	r 1 Trology India	rators:							
Primary Indic	ators (minimu	um of one is	required;	check all that apply	/)			Secondary Indicators (mir	nimum of two required)
	ator (A1)		1 1	Water-Staine	d Leaves (B9)			(S (B6)
High Water	r Table (A2)				a (B13)	20)		Drainage Patterns	(B10)
	(A3)			True Aquatic	Plants (B1	4)		Dry-Season Water	Table (C2)
Water Mark	ks (B1)			Hydrogen Sul	fide Odor (, (C1)		Crayfish Burrows ((C8)
Sediment [Deposits (B2)			Oxidized Rhiz	ospheres	along Livir	ig Roots (C	3) Saturation Visible	on Aerial Imag.(C9)
Drift Depos	sits (B3)			Presence of F	Reduced Ir	on (C4)		Stunted or Stresse	ed Plants (D1)
Algal Mat c	or Crust (B4)			Recent Iron F	Reduction in	n Plowed S	Soils (C6)	Geomorphic Positi	ion (D2)
Iron Depos	its (B5)			Thin Muck Su	urface (C7))		FAC-Neutral Test	(D5)
Inundation	Visible on Aeria	al Imagery (B	7)	Gauge or We	ell Data (D9	9)			
Sparsely V	egetated Conca	ave Surf. (B8)		Other (Explai	n in Rema	rks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	N	o <u>X</u> Depth	(inches):				
Water Table	Present?	Yes	N	o X Depth	(inches):				
Saturation P	resent?	Yes	N	o X Depth	(inches):			Wetland Hydrology Present?	Yes No_X
Describe Recor	ded Data (strea	im gauge, mo	nitoring wel	I, aerial photos, previ	ous inspec	tions), if a	vailable:		
Remarks:									
No indicators of	of wetland hydro	ology were ob	served. The	e area slopes away fro	om the adja	acent eme	rgent wetla	nd.	

Application/Doment	Project/Site: Gretna Bottoms		City/Count	ty:	Sarpy Coun	ity S	Sampling Dat	.e: 4/3	0/2015	5	
Immedigator: Ban Fisher Austin Zigler Section, Townshp, Rang S 10 T 13N R 10E Landtern (fillalbope, terrate, st.): Hillalope Local Relief (concave, convex, none): Convex Immediate (concave, convex, none): Immediate (concave, con	Applicant/Owner: Lyman-Richey Corp	poration			State	NE	Sampling Poi	int: S-	44		
Landom (hillalopa, terrace, etc.): Hilletope Local Relief (concave, corvex, none): Canvax Siper, My, 2 Lat: 41.066566621865 Long: -64.283375626513 Datum: NAD 1983 Siper, My, 2 Lat: 41.066566621865 Long: -64.283375626513 Datum: NAD 1983 Are Vagetation	Investigators: Ben Fisher	Austin Zigler		Ś	Section, Tov	vnship, Range	S 16 T 1	13N	R 10	E	
Stope(%): 2 Lat: 41.0965669621895 Long: -96.2333755285153 Datum: Nonc And Million Control (Control (Cont	Landform (hillslope, terrace, etc.):	Hillslope			Local Rel	ief (concave, co	nvex, none):	Conve	эх		
Sell Map Unit Name: Sibbon loamy fine sand, overwash, occasionally flooded NVII Classification: None Are climatic / hydrologic conditions on the site trylical for this time d year? Yes X no (ff No, explain in Remarks). Are vegetation , Soil , Hydrology: isplinicantly disturbed? Are Normal ICcuramances' present? Yes X no Hydrophytic Vegetation Present? Yes X No	Slope(%): 2 Lat: 41.0	965669621895	Long: -	96.293375529	95153	Datum:	NAD 1983				
Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No (If No, explain in Remarks) Are Vegetation <u>Soil</u> , Hydrology <u>significantly</u> disturbed? Are Vegetation <u>Soil</u> , Hydrology <u>significantly</u> disturbed? Are Vegetation <u>Soil</u> , Hydrology <u>significantly</u> disturbed? Xet Vegetation Present? Yes <u>X</u> No Hydrology Present? Yes <u>No X</u> vestand Hydrology Present? Yes <u>No X</u> within a Wetland? Yes <u>No X</u> is the Sampled Area within a Wetland? Yes <u>No X</u> remarks: The dra characterized by this data form is an upland area adjacent to the wetland characterized S-45. The area failed to display indicators of hydric soil and wetland Hydrology; however, the area and hydrology wegetation criteria. VEGETATION . Use scientific names of plants. <u>Absolute</u> <u>Dominant</u> <u>Statum</u> <u>Statum</u> <u>Statum</u> <u>Statum</u> (Plot size: <u>15Ft</u>) <u>Comma domemoral</u> <u>Comma domemoral</u>	Soil Map Unit Name: Gibbon loamy fi	ne sand, overwash, occa	asionally floo	ded		NWI Classificat	ion: None				
Are Vegetation	Are climatic / hydrologic conditions on the	site typical for this time	of year?	Yes X	No	(If No, expla	ain in Remark	(S)			
Are Vegetation	Are Vegetation Soil Hvdr	ology significant	v disturbed?	Α	re "Normal	 Circumstances"	present?	Yes	х	No	
Wither a welfact any service servic	Are Vegetation . Soil . Hvdr	ology . naturally p	roblematic?		(If peeded		ware in Dem	orko)		_	
SUMARY OF FINUNCS - Attach a site maps howing sampling point locations, transects, important reatures, etc. Hydrophytic vegatation Present? Yes No X Welland Hydrology Present? Yes No X Remarks: Is the Sampled Area within a Welland? Yes No X The area characterized by this data form is an upland area adjacent to the welland characterized S-45. The area failed to display indicators of hydric soil and welland hydrology, however, the area met hydrophytic vegatation criteria. Dominance Test Worksheet: Number of Dominant Species Tee Stratum Stratus 10 N FACU Percent of Dominant Species Total Number of Dominant Species Total Number of Dominant Species 75.0% (AB) Stratum 20 Y FACU Previence Index Worksheet: Total Number of Dominant Species 75.0% (AB) Conside sative 20 Y FACU Prevalence Index Socies 0 x1 = 0 Status 10 N FACU Prevalence Index Socies 0 x1 = 0 Status 10 N FACU Prevalence Index Socies 0 x1 = 0 Status 10 N FACU Prevalence In			•		(If needed,	explain any ans	wers in Rem	arks.)			_
Proceedings Ves No X Wetland Hydrology Present? Yes No X Remarks: No X Is the Sampled Area within a Wetland? Yes No X Remarks: No X Is the Sampled Area within a Wetland? Yes No X Performation No X Is the Sampled Area within a Wetland? Yes No X Remarks: The area characterized by this data form is an upland area adjacent to the wetland characterized S-45. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) Shub Stratum (Plot size: 10 Yes FAC Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A) Brows attissimus 20 Y FAC Prevalence Index Worksheet: That Are OBL, FACW, or FAC: 75.0% (A) Canambe sativa 20 Y FAC Prevalence Index Worksheet: That Are OBL, FACW, or FAC: 75.0% (A) Unica dioica 10 N FACU Pre	SUMMARY OF FINDINGS - Atta	ach a site map sho	owing sar	npling poli	nt locatio	ns, transect	s, importa	ant tea	iture	es, etc	C.
No No X within a Wetland Pythology Present? Yes No X Remarks: The area characterized by this data form is an upland area adjacent to the wetland characterized S-45. The area failed to display indicators of hydric soil and wetland hydrology, however, the area met hydrophytic vegetation criteria. Absolute Strub Stratum	Hydric Soil Present?		Is the Sa	ampled Area							
Total Number 9 in total Number 9 in total Number 9 in the interval of the inter	Wetland Hydrology Present?		within a	Wetland?		Yes	No	Х			
Remarks: The area characterized by this data form is an upland area adjacent to the wetland characterized S-45. The area failed to display indicators of hydric soil and wetland hydrology; however, the area met hydrophytic vegetation criteria. VEGETATION_ Use scientific names of plants. Absolute Dominant Indicator Situatur Indicator Situatur Openimant Species Total Number of Dominant Species Situatur Provide openimant Species Total Number of Dominant Species Situatur Provide openimant Species Total Number of Dominant Species Situatur Prevalence Index Worksheet: Comus drummondi Total Cover Metro Stratum (Plot size: 6 Ft) Bromus inermis 20 Y FACU Rum colspan="2">Multiply by: Claristum averase 20 Y FACU Rum colspan="2">Multiply by: Claristum averase 20 Y <td></td> <td>es <u>No X</u></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		es <u>No X</u>									
The area characterized by this cala holins an optical area datacent to the vector of t	Remarks:	is on unland area adias	ont to the w	tland abaract	orized S 15	The erec foiler	to diaplay in	diantors	ofbu	dria aa	
VEGETATION – Use scientific names of plants. Absolute % Cover Dominant % Decises Indicator % Status Tree Stratum Shrub Stratum (Plot size: 15Ft _) Cornus drummodii Satiz interior 70 Y FAC FAC Total Number of Dominant Species Across all Strate: 4 (B) Bornus interior 10 N FAC Percent of Dominant Species Across all Strate: 4 (B) Bornus internis 40 Y FAC Percent of Dominant Species Across all Strate: 4 (B) Connosis autiva 20 Y FAC Prevalence Index Worksheet: Total % Cover of: Multiply by: Connosis autiva 20 Y FAC Total % Cover of: Multiply by: Connosis autiva 20 Y FAC Total % Cover of: Multiply by: Connosis autiva 10 N FAC FAC FAC FAC Vine Stratum 10 N FAC Total % Cover of: Multiply by: Connosis Strate X 1 = 0 Connosis Strate Vine Stratum 10 N FAC FAC FAC FAC FAC FAC Conn	and wetland hydrology; however, the are	a met hydrophytic veget	ation criteria		enzeu 5-45.	The area falled	to display in	laicators	orny)
VEGETATION- Use scientific names of plants. Absolute 3 Cover Dominant Species Indicator. Status Dominance Test Worksheet: Irree Stratum (Plot size: 15Ft) 0 70 Y FAC Cornus drummondi 70 Y FAC Total Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) Herb Stratum (Plot size: 6 Ft) 0 **Total Cover Total Number of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A)B Bronus inermis 40 Y FACU Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A)B Mumex atissamus 20 Y FACU Percent of Dominant Species Total % Cover of: Multiply by: 70.0% (A)B Uritica dioica 10 N FACU Total % Cover of: Multiply by: 71.0% (A)B Vine Stratum 10 N FACU Total % Cover of: Multiply by: 72.0% (A)B Vine Stratum 10 N FACW FACU Total % Cover of: Multiply by: 70.0% (A)B 70.0% (A)B 70.0% (A)B 70.0% <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>											
Stratum Subscript Stratus Dominance Test Worksheet: Stratum (Plot size: 15Ft) (A) Conus drummondi 70 Y FAC Satix interior 10 N FACW Bromus inermis 10 N FACW Carnabis sativa 20 Y FAC Rumex attissimus 20 Y FACW Cirsium arvense 10 N FACW Solidago giganea 10 N FACW Vine Stratum 0	VEGETATION Use scientific n	ames of plants	Absolute	Dominant	Indicator						
Iree Stratum Number of Dominant Species 3 (A) Shub Stratum (Plot size: <u>15Ft</u>) 70 Y FAC Gornus drummondi 10 N FACW FAC Botter Stratum 10 N FACW Species 3 (A) Herb Stratum (Plot size: <u>6 Ft</u>) Botter Stratum 4 Y FACW Species Across all Strata: 4 (B) Bronus inermis 40 Y FACW FACW Frevalence Index Worksheet: 10 N FACW Total % Cover of: Multiply by: 0 Y FACW Total % Cover of: Multiply by: 0 Y FACW Total % Cover of: Multiply by: 0 Y FACW FACW pecies 0 X 1 = 0 N FACW FAC Species 0 X 3 = 270 FAC Species 0 X 3 = 270 FAC Species 0 X 3 = 270 FAC Species 0 X 5 = 0 Corrus diada for an accore FAC Species 0 X 5 = 0 Corrus diada for an accore Species 0 X 5 =		anes of plants.	<u>% Cover</u>	Species	<u>Status</u>	Dominance 1	Fest Worksh	eet:			
Shrub Stratum (Plot size: 15Ft) Corrus drummondii 70 Y FAC 3alx interior 10 N Bromus inermis 0 Y Cannabis sativa 20 Y Rumex attisaimus 20 Y Cannabis sativa 20 Y Rumex attisaimus 10 N Circium aivense 10 N Solidago gigantes 10 N Urtica dioica 10 N Provalence Index Worksheet: X1 = Vine Stratum 10 N Vine Stratum No Vine Stratum<	Tree Stratum					Number of D	ominant Spe	cies		з	(Δ)
Corrus drummondii 70 Y FAC Total Number of Dominant Salix interior 10 N FACW Species Across all Strata: 4 (B) Herb Stratum (Plot size: <u>6 Ft</u>) 9 =Total Cover FACW Percent of Dominant Species 75.0% (A/B) Bromus inermis 40 Y FAC FAC Prevalence Index Worksheet: Total % Cover of: Multiply by: 0 X1 = 0 X1 = 0 0 X1 = 0 0 X1 = 0 0 X1 = 0	Shrub Stratum (Plot size: 15	5Ft)				That Are OBI	L, FACW, or	FAC:		5	(~)
Salix interior 10 N FACW Species Across all Strata: 4 (B) Herb Stratum (Plot size: <u>6 Ft</u>)) 0 Y FACW Percent of Dominant Species That Are OBL, FACW, or FAC:	Cornus drummondii	,	70	Y	FAC	Total Number	of Dominant	t			
Herb Stratum (Plot size: <u>6 Ft</u>) Browus inermis 40 Y FACU Quo Y FACU Runex attissimus 20 Y FACU Ciristum avense 10 N FACU Solidago gigantea 10 N FACW Unica dioica 10 N FACW Vine Stratum Vine Stratum FACW FACW Vine Stratum Vine Stratum Vine Stratum FACW Vine Stratum Vine Stratum Solo	Salix interior		10	N	FACW	Species Acro	ss all Strata:			4	(B)
Herb Stratum (Plot size: <u>6 Ft</u>)			80	=Total Cover		Porcont of Do	minant Snoo	vioc			
Browus inermis 40 Y FACU Canabis sativa 20 Y FAC Rumex attissimus 20 Y FACW Cirisium arvense 10 N FACW Solidago gigantea 10 N FACW Urtica dioica 10 N FACW 10 N FACW OBL species 0 x1 = 0 Vine Stratum 10 N FACW FACW species 50 x2 = 100 Yine Stratum 10 N FACW FACW species 0 x5 = 0 Vine Stratum 110 =Total Cover Column Totals: 190 (A) 570 (B) Prevalence Index = B/A= 3.00 3.00 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index 5.0 X Dominance Test > 50% X Prevalence Index 5.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic. Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Herb Stratum (Plot size: 6	Ft)				That Are OBL	, FACW, or F	FAC:	7	5.0%	(A/B)
Cannabis sativa 20 Y FAC Total % Cover of: Multiply by: Cirsium arvense 10 N FACU OBL species 0 x1 = 0 Solidago giganea 10 N FACU OBL species 0 x1 = 0 Urica dioica 10 N FACU OBL species 0 x3 = 270 Vine Stratum 10 N FACU FACU FACU FACU Solidago igantea 0 x1 = 0 Vine Stratum 10 N FACU FACU FACU FACU species 50 x2 = 100 Vine Stratum 110 =Total Cover FACU FACU species 0 x5 = 0 Vine Stratum 100 N FACU Stratu 190 (A) 570 (B) Prevalence Index = B/A= 3.00 Y Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Y Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks o	Bromus inermis		40	Y	FACU						
Rumex attissimus 20 Y FACW Total % Cover of: Multiply by: Cirsium arvense 10 N FACU OBL species 0 x1 = 0 Urtica dioica 10 N FACW FACW species 50 x2 = 100 Vine Stratum 10 N FACW FACW species 50 x4 = 200 Vine Stratum 110 =Total Cover FACW species 0 x5 = 0 Vine Stratum 0 N FACW FACW species 0 x5 = 0 Vine Stratum 0 N FACW FACW FACW species 0 x5 = 0 Vine Stratum 0 x5 = 0 x5 = 0 x5 = 0 Vine Stratum Vine Stratum 0 A 570 (B) Prevalence Index = B/A = 3.00 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? </td <td>Cannabis sativa</td> <td></td> <td>20</td> <td>Y</td> <td>FAC</td> <td>Prevalence I</td> <td>ndex Works</td> <td>neet:</td> <td></td> <td></td> <td></td>	Cannabis sativa		20	Y	FAC	Prevalence I	ndex Works	neet:			
Cirsium arvense 10 N FACU OBL species 0 x 1 = 0 Solidago gigantea 10 N FACW FACW species 50 x 2 = 100 Urtica dioica 10 N FACW FACW species 90 x 3 = 270 Vine Stratum	Rumex altissimus		20	Y	FACW	Total % C	Cover of:	<u>N</u>	/lultiply	y by:	
Solidago gigantea 10 N FACW FACW FACW species 50 X 2 = 100 Urtica dioica 10 N FACW FACW FACW FACW species 90 X 3 = 270 Vine Stratum 110 =Total Cover FACW FACW FACU species 90 X 3 = 270 Vine Stratum 110 =Total Cover FACW FACU species 90 X 5 = 0 Vine Stratum <td>Cirsium arvense</td> <td></td> <td>10</td> <td>N</td> <td>FACU</td> <td>OBL species</td> <td>0</td> <td> X '</td> <td>1=</td> <td>0</td> <td></td>	Cirsium arvense		10	N	FACU	OBL species	0	X '	1=	0	
Unca dioica 10 N PACW FAC species 90 x 3 = 270 Vine Stratum 110 =Total Cover FAC species 50 x 4 = 200 UPL species 0 x 5 = 0 clubeled clubeled 570 (B) Prevalence Index = B/A 3.00 100 A 570 (B) Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation (Explain) Indicators of nydric soil and wetland hydrology must be present? Yes X Remarks: (Include photo numbers here or on a separate sheet.) Yes X No	Solidago gigantea		10	N	FACW	FACW specie	es50	X	2 =	100	
Vine Stratum FACU species 50 x 4 = 200 UPL species 0 x 5 = 0 Column Totals: 190 (A) 570 (B) Prevalence Index = B/A= 3.00 Hydrophytic Vegetation Indicators:			10	N	FACW	FAC species	90	X	3 =	270	
Vine Stratum_ UPL species 0 x5 = 0 Column Totals: 190 (A) 570 (B) Prevalence Index = B/A= 3.00 3.00 Hydrophytic Vegetation Indicators:			110	_=Total Cover		FACU specie	es50	X -	4 =	200	
Column Totals: 190 (A) 570 (B) Prevalence Index = B/A= 3.00 Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No	Vine Stratum					UPL species	0	x :	5 =	0	
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Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No						Prevale	ence Index =	B/A=	3	3.00	
Hydrophytic Vegetation Indicators. Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No						Ludrophytic \	logotation Ir	dicato			
Rapid Test for Hydrophytic Vegetation X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No							vegetation in		'S:		
X Dominance Test > 50% X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.)							st for Hydrop	nytic ve	getati	on	
X Prevalence Index ≤ 3.0 Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.)						X Dominan	ce lest $> 50^\circ$	%			
Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.)						X Prevalen	ce Index ≤ 3.0	0			
Indicators of on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.)						Morpholo	gical Adapta	tions (P	'rovide	e supp	orting
Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No						Problema	atic Hydrophy	tic Veae	etation	i (Exc	olain)
Be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes X No						Indicators of	hydric soil ar	nd wetla	nd hv	droloav	v must
Hydrophytic Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.)						be present, u	unless disturb	bed or pr	roblem	natic.	,
Vegetation Present? Yes X No Remarks: (Include photo numbers here or on a separate sheet.) X X No						Hydroph	ytic				
Remarks: (Include photo numbers here or on a separate sheet.)						Vegetation P	resent?	(es)	< N	0	
	Remarks: (Include photo numbers here of	or on a separate sheet.)				<u> </u>					



Profile Descri	iption: (Des	cribe to the	depth nee	ded to docume	nt the indi	cator or	confirm	n the absence of Indicators.)	
Depth		Matrix			Redox Fea	atures		_	
(inches)	Colo	r (moist)	%	Color (moist)	%	Type 1	Loc ²	Texture Remarks	
0 to 12	10YR	3/1	100					LOAMY SAND	
12 to 18	10YR	4/2	100					SAND	
¹ Type: C=Con	centration, I	D=Depletion,	RM=Reduc	ced Martix, CS=	Covered or	Coated	Sand Gra	rains. ² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil I	ndicators:		F	7				Indicators for Problematic Hydric Soils: ³	
Histosol (A	1)		L	Sandy Gleyed	Matrix (S4)			Coast Prairie Redox (A16)	
Histic Epipe	edon (A2)			_ Sandy Redox (S5)			Iron-Manganese Masses (F12)	
Black Histic	c (A3)		L	Stripped Matrix	: (S6)			Dark Surface (S7)	
Hydrogen S	Sulfide (A4)			Loamy Mucky I	Vineral (F1)			Very Shallow Dark Surface (TF12)	
Stratified La	ayers (A5)			Loamy Gleyed	Matrix (F2)			Other (Explain in Remarks)	
2 cm Muck	(A10)			Depleted Matrix	k (F3)			Other (Explain in Remarks)	
Depleted B	elow Dark Su	rface (A11)		Redox Dark Su	rface (F6)				
Thick Dark	Surface (A12)		Depleted Dark	Surface (F7)			3	
Sandy Muc	ky Mineral (S	1)		Redox Depress	sions (F8)			 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless 	
5 cm Muck	y Peat or Pea	t (S3)						disturbed or problematic.	
🗆 Restricti	ive Layer (if observe	d):						
Туре:								Hydric Soil Present? Yes No	x
Depth (inch	nes):								
		ed to display in	Idicators of h	yaric soil.					
HYDROLOG	Y								
Wetland Hyd Primary Indic	Irology Ind ators (minim	icators: num of one is	required; c	heck all that app	oly)			Secondary Indicators (minimum of two require	red)
Surface Wa	ater (A1)			Water-Stair	ned Leaves (B9)		Surface Soil Cracks (B6)	
High Water	Table (A2)			Aquatic Fau	una (B13)	-		Drainage Patterns (B10)	
Saturation ((A3)			True Aquat	ic Plants (B1	4)		Dry-Season Water Table (C2)	
U Water Mark	ks (B1)			Hydrogen S	Sulfide Odor ((C1)		Crayfish Burrows (C8)	
Sediment D	Deposits (B2)			Oxidized RI	nizospheres	along Livir	ng Roots ((C3) Saturation Visible on Aerial Imag.(C9)	
Drift Depos	its (B3)			Presence o	f Reduced Ir	on (C4)		Stunted or Stressed Plants (D1)	
Algal Mat o	or Crust (B4)			Recent Iron	Reduction in	n Plowed	Soils (C6)	6) Geomorphic Position (D2)	
Iron Deposi	its (B5)			Thin Muck	Surface (C7))		FAC-Neutral Test (D5)	
	Visible on Ae	rial Imagery (B	7)	Gauge or V	Vell Data (D9	ə)			
Sparsely Ve	egetated Con	cave Surf. (B8)	U Other (Expl	ain in Remai	rks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	No	<u>X</u> Dept	th (inches):			-	
Water Table	Present?	Yes	NO	<u>X</u> Depi	in (inches):			Wetland Hydrology Present? Yes No	x
Describe Descri		165				41			
Describe Record	ded Data (stre	am gauge, mo	onitoring well,	aeriai photos, pre	vious inspec	tions), if a	vallable:		
Remarks									
The area failed	I to meet wetla	and hydrology	criteria. The	area is elevated at	pove the adja	acent wetla	and.		



Project/Site:	Gretna Bottoms		City/Coun	ty:	Sarpy Cour	nty	Samp	oling Date:	4/30/20	15	
Applicant/Owner	r: Lyman-Riche	y Corporation			State	: NE	Sam	pling Point:	S-45		
Investigators:	Ben Fisher	Austin Zigler			Section, Tov	vnship, Range	e S16	6 T 13N	R ′	I0E	
Landform (hillslo	ope, terrace, etc.):	Depression			Local Re	ief (concave,	convex	, none): Co	oncave		
Slope(%): 0	Lat:	41.0966455779029	Long:	-96.29352887	32082	Datum:	NAD	1983			
Soil Map Unit Na	ame: Gibbon loa	amv fine sand. overwash. occ	asionally floc	oded		NWI Classific	cation:	None			
Are climatic / hyd	drologic conditions	on the site typical for this time	of year?	Yes X	No	(If No, ex	plain in	Remarks)			
Are Vegetation	. Soil	Hydrology significant	lv disturbed?		Are "Normal	Circumstance	es" pres	sent? Yes	х	No	
Are Vegetation	. Soil .	Hydrology . naturally p	roblematic?		(If pooded			in Domorko			
		• • • • • • • • • • • • • • • • • • •			(il needed,	explain any a	inswers		.)		
		- Attach a site map sho	owing sar	npling pol	nt locatio	ons, transe	ects, I	mportant	teatur	'es, et	С.
Hydropnytic Ve	egetation Present?	Yes <u>X</u> NO	Is the S	ampled Area							
Wetland Hydro	blogy Present?	Yes X No	within a	Wetland?		Yes	X	No			
Wettand Hydro	logy i resent:	Yes X No									
Remarks:			d avea Tha		-l :l't	- f		tion bundaio		ما ، م ا م	
hydrology.	ictenzed by this data	a form is a scrub-shrub wellan	id area. The	area displaye	a maicators	σι πγατορηγιιά	vegeta	ation, nyanc	sons, an	id wettai	na
VECETATIC		fie nomes of plants	Absolute	Dominant	Indicator						
VEGETATIC	JN - Use scienti	inc names of plants.	% Cover	Species	<u>Status</u>	Dominanc	e Test	Worksheet:			
Tree Stratum	<u>1</u>					Number of	Domin	ant Species		2	(4)
Shrub Stratu	<u>m</u> (Plot size	e: 15Ft)				That Are C	OBL, FA	CW, or FAC	:	3	(A)
Salix inte	erior	- <u></u> ,	80	Y	FACW	Total Numb	ber of D	Oominant			
			80	=Total Cover		Species Ac	cross al	I Strata:		3	(B)
Herb Stratum	<u>n</u> (Plot size	e: 6 Ft)				Dereent of	Domine	ant Chaoling			_
Spartina	pectinata	· <u>· · · · · · · · · · · · · · · · · · </u>	50	Y	FACW	That Are O	BL, FA	CW, or FAC	:	100.0%	(A/B)
Rumex a	altissimus		30	Y	FACW						
Carex fe	stucacea		10	Ν	FACW	Prevalence	e Index	Worksheet			
Reynouti	ria japonica		10	Ν	FACU	Total %	% Cove	r of:	Multi	oly by:	
			100	=Total Cover		OBL specie	es	0	_ X 1 =	0	
Vine Stratum	<u>1</u>					FACW spe	cies	170	_ X Z =	340	
						FAC specie	es	0	_ x 3 =	0	
						FACU spe	ecies	10	_ x 4 =_	40	
						UPL specie	es	0	_ x 5 =_	0	
						Column To	tals:	180	(A)	380	<u>(</u> B)
						Preva	alence	Index = B/A=	=	2.11	
						Hydronhyti	c Vege	tation Indic	ators:		
						X Ranid	Test for	r Hydronbyti		ation	
								r = 100000000000000000000000000000000000	, vegett		
								day < 2.0			
						Prevai	ence m	$dex \ge 3.0$	(D		
						data in	ological Remai	rks or on a s	s (Provi eparate	ae supp sheet)	orting
						Proble	matic H	lydrophytic \	/egetatio	on (Exp	olain)
						Indicators be presen	of hydr t, unles	ric soil and w	etland h	ydrolog ematic.	y must
						Hydrop Vegetation	phytic n Prese	nt? Yes	x	No	
Remarks: (Inclu The area displa	ude photo numbers ayed dominant hydro	here or on a separate sheet.) ophytic vegetation.									



Profile Descri	iption: (Des	cribe to the	depth ne	eded to doc	ument the ind	licator or	confirm	the absence of Indicators.)	
Depth		Matrix			Redox Fe	eatures			
(inches)	Color	(moist)	%	Color (m	oist) %	Type ¹	Loc ²	Texture	Remarks
0 to 6	10YR	2/1	100					SILTY CLAY LOAM	
6 to 18	10YR	2/1	95	7.5YR 4	/6 5	С	Μ	SILTY CLAY LOAM	
¹ Type: C=Con	centration, D	=Depletion,	RM=Red	uced Martix,	CS=Covered c	or Coated S	Sand Gra	ains. ² Location: PL=Pore Lining,	M=Matrix.
Hydric Soil I Histosol (A' Histic Epipe Black Histic Hydrogen S Stratified La 2 cm Muck Depleted B Thick Dark Sandy Muc 5 cm Muck Restricti Type: Depth (inch	ndicators: 1) edon (A2) c (A3) Sulfide (A4) ayers (A5) (A10) elow Dark Sur Surface (A12) eky Mineral (S1 y Peat or Peat ive Layer (face (A11)) (S3) if observe	d):	 Sandy Gla Sandy Re Stripped N Loamy Mt Loamy Gla Depleted Redox Da Depleted Redox Depleted 	eyed Matrix (S4) dox (S5) Matrix (S6) ucky Mineral (F1 eyed Matrix (F2) Matrix (F3) rk Surface (F6) Dark Surface (F6) pressions (F8)	7)		Indicators for Problematic Hy □ Coast Prairie Redox (A16) □ Iron-Manganese Masses (F12) □ Dark Surface (S7) □ Very Shallow Dark Surface (TF □ Other (Explain in Remarks) ³ Indicators of hydrophytic vegeta wetland hydrology must be prese disturbed or problematic Hydric Soil Present? Yes	dric Soils: ³ 12) tion and nt, unless esXNo
HYDROLOG Wetland Hyd Primary Indic	Y Irology Indi ators (minim ater (A1)	cators: um of one is	required;	check all tha	t apply) -Stained Leaves	(B9)		Secondary Indicators (minin	num of two required)
High Water	Table (A2)			Aquati	c Fauna (B13)			Drainage Patterns (B	10)
Saturation ((A3)			True A	quatic Plants (B	14)		Dry-Season Water T	able (C2)
Water Mark	ks (B1)			Hydro	gen Sulfide Odor	r (C1)		Crayfish Burrows (C8	3)
Sediment D	Deposits (B2)			Oxidiz	ed Rhizospheres	s along Livir	ng Roots (C3) Saturation Visible on	Aerial Imag.(C9)
Drift Depos	sits (B3)				t Iron Reduction	Iron (C4)		Stunted or Stressed	Plants (D1)
	its (B5)				LITON Reduction	10 Plowed 3	5011S (C6)	EAC-Neutral Test (D	(D2) 5)
	Visible on Aer	ial Imagery (B	7)		e or Well Data (D	,))9)			5)
Sparsely Ve	egetated Conc	ave Surf. (B8)	Other	(Explain in Rem	arks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	1	No X	Depth (inches):				
Water Table	Present?	Yes	1	No X	Depth (inches):			-	
Saturation Pr	esent?	Yes	X	No	Depth (inches):		0	Wetland Hydrology Present?	Yes <u>X</u> No
Describe Record	ded Data (stre	am gauge, mo	onitoring we	ell, aerial photo	s, previous inspe	ections), if a	vailable:		
Remarks: The area displa	ayed indicators	of wetland h	ydrology.						

Project/Site: Gretna Bottoms	City/Count	ty:	Sarpy Cour	nty	Sampling I	Date:	4/30/20	015	
Applicant/Owner: Lyman-Richey Corporation			State	: NE	Sampling	Point:	S-46		
Investigators: Ben Fisher Austin Zigle	r		Section, Tov	vnship, Range	S 16	T 13N	R	10E	
Landform (hillslope, terrace, etc.): Hillslope			Local Rel	ief (concave, co	onvex, non	e): C	onvex		
Slope(%): 2 Lat: 41.0976404198435	Long: -	96.29353427	73848	Datum:	NAD 1983				
Soil Map Unit Name: Gibbon loamy fine sand overwash occ	asionally floo	ded		NWI Classifica	tion: Nor	ne			
Are climatic / hydrologic conditions on the site typical for this time	of vear?	Yes X	No	(If No. expl	ain in Rem	arks)			
Are Vegetation Soil Hydrology significant	tly disturbed?		re "Normal	Circumstances	" nresent?	Voc	×	No	
Are Vegetation Soil Hydrology paturally r	problematic?	F		Oneumstances	presenti	100			
Are vegetation, Son, Hydrology, haturally p			(If needed,	explain any an	swers in R	emarks	5.)		
SUMMARY OF FINDINGS - Attach a site map sh	owing sar	npling poi	nt locatio	ns, transec	ts, impo	ortant	featu	res, et	с.
Hydrophytic Vegetation Present? Yes <u>No X</u>	le tha S	ampled Area							
Hydric Soil Present? Yes <u>No X</u>	within a	Wetland?		Yes	No	х			
Wetland Hydrology Present? Yes <u>No X</u>									
Remarks:									
The area characterized by this data form is an upland area adjace hydrophytic vegetation, and wetland hydrology.	cent to the we	etland charact	erized by S-	45. The area fa	iled to disp	olay inc	licators	of hydric	soil,
	Absolute	Dominant	Indicator						
VEGETATION Use scientific names of plants.	<u>% Cover</u>	Species	Status	Dominance	Test Work	sheet			
Tree Stratum				Number of D	Dominant S	pecies			
Shrub Stratum (Plot size: 155t)				That Are OB	L, FACW,	or FAC):	1	(A)
Salix interior	20	Y	FACW	Total Numbe	er of Domin	ant			
	20	-Total Cover		Species Acro	oss all Stra	ta:		3	(B)
Herb Stratum (Plot size: C Ft)									
Boutelous dactidoides	50	v	FACU	Percent of D	ominant S	Decies	·.	33.3%	(A/B)
Solidado canadensis	20	Y	FACU	That Are ob	L, I AOW, 1	orrac			
Elymus virginicus		N	FACW	Prevalence	Index Wor	kshee	t:		
Rumex altissimus	10	N	FACW	Total %	Cover of:		Mult	iply by:	
Rumex crispus	10	N	FAC	OBL species	·	0	x 1 =	0	
	100	=Total Cover		FACW speci	es	40	x 2 =	80	
Vine Stratum				FAC species	i	10	x 3 =	30	
				FACU speci	es	70	x 4 =	280	
				UPL species		0	x 5 =	0	
						120	(A)	390	(B)
					us:		_('')		(
				Preval	ence index	(= B/A	=	3.25	
				Hydrophytic	Vegetatio	n Indio	ators:		
				Rapid Te	est for Hyd	rophyti	c Veget	ation	
				Dominar	nce Test >	50%			
				Prevaler	nce Index ≤	≦ 3.0			
				Morphol	ogical Ada	ptation	s (Prov	ide supp	orting
				data in F	Remarks or	onas	eparate	e sheet)	
				Problem	atic Hydroj	ohytic	Vegetat	ion (Exp	plain)
				Indicators o be present,	f hydric soi unless dis	l and v turbed	vetland or probl	hydrolog ematic.	ly must
				Hydroph Vegetation F	lytic Present?	.,			v
				vegetation	resent:	Yes		NO 2	^



Deptn Induity Color (moist) % Color (moist) % Type 1 Loc 2 Texture 0 to 6 10YR 4 / 2 100 SAND 6 to 20 10YR 5 / 2 100 SAND 20 to 22 10YR 2 / 1 100 SILTY CLAY LOAM "Itype: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. Location: PL=Pore Hydric Soil Indicators: Indicators for Problem Histosol (A1) Sandy Gleved Matrix (S4) Sandy Gleved Matrix (S4)	
0 to 6 10YR 4 / 2 100 10VR SAND 0 to 6 10YR 5 / 2 100 SAND 20 to 22 10YR 2 / 1 100 SILTY CLAY LOAM 1Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. 4 Location: PL=Pore Hydric Soil Indicators: Sandy Gleved Matrix (S4) Indicators for Problem	Remarks
0 10 TR 47 2 100 SAND 6 to 20 10 YR 5 / 2 100 SAND 20 to 22 10 YR 2 / 1 100 SILTY CLAY LOAM 1Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. Location: PL=Pore Hydric Soil Indicators: Sandy Gleved Matrix (S4) Indicators for Problem	
6 to 20 10YR 57.2 100 SAND 20 to 22 10YR 2/1 100 SILTY CLAY LOAM 1Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. 4 coation: PL=Pore Hydric Soil Indicators: Indicators for Problem Histosol (A1) Sandy Gleved Matrix (S4)	
20 to 22 10YR 27.1 100 SILTY CLAY LOAM ¹ Type: C=Concentration, D=Depletion, RM=Reduced Martix, CS=Covered or Coated Sand Grains. 4Location: PL=Pore Hydric Soil Indicators: Indicators for Problem Histosol (A1) Sandy Gleved Matrix (S4)	
Hydric Soil Indicators: Histosol (A1) Histosol (A1) Histo	
Hydric Soil Indicators: Indicators for Problem Histosol (A1) Sandy Gleved Matrix (S4)	e Lining, M=Matrix.
Histosol (A1) Sandy Gleved Matrix (S4)	natic Hydric Soils: ³
Ceast Brainia Baday /	(A1C)
Histic Epipedon (A2) Sandy Redox (S5)	(A10)
Black Histic (A3)	363 (1 12)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1)	
Stratified Lavers (A5)	urface (TF12)
Commerce Layor (12) Other (Explain in Ren	narks)
Depleted Below Dark Surface (A11)	
Thick Dark Surface (A12)	
Constant Surface (A12) Depleted Dark Surface (F7) Indicators of hydrophy Indicators of hydrophy	tic vegetation and
Sandy Mucky Mineral (S1) Redox Depressions (F8) wetland hydrology must	t be present, unless
5 cm Mucky Peat or Peat (S3)	roblematic.
Restrictive Layer (if observed):	
Type:	
Depth (inches):	
HYDROLOGY Wetland Hydrology Indicators: Drimony Indicators (minimum of one is required; check all that apply)	re (minimum of two required)
Surface Water (A1)	bil Cracks (B6)
High Water Table (A2)	Patterns (B10)
Saturation (A3) True Aquatic Plants (B14) Div-Seaso Weiger Made (B4) Cravifish B	
Water Marks (B1) Gravitant Deposite (P2) Ovidized Rhizospheres along Living Roots (C3) Saturation	Visible on Aerial Imag (C9)
Sediment Deposits (B2) Oxidized Knizospheres along Living Kools (C3) Oxidized Knizospheres along Living Kools (C3) Stunded or	Stressed Plants (D1)
	ic Position (D2)
Algal Mat or Crust (B4)	al Test (D5)
□ Algal Mat or Crust (B4) □ Recent Iron Reduction in Plowed Soils (C6) □ Geomorph □ Iron Deposits (B5) □ Thin Muck Surface (C7) ✓ FAC-Neutr	
Algal Mat or Crust (B4) □ Recent Iron Reduction in Plowed Soils (C6) □ Geomorph □ Iron Deposits (B5) □ Thin Muck Surface (C7) ✓ FAC-Neutr □ Inundation Visible on Aerial Imagery (B7) □ Gauge or Well Data (D9) ✓	
Algal Mat or Crust (B4) □ Recent Iron Reduction in Plowed Soils (C6) □ Geomorph □ Iron Deposits (B5) □ Thin Muck Surface (C7) ☑ FAC-Neutr □ Inundation Visible on Aerial Imagery (B7) □ Gauge or Well Data (D9) ☑ Sparsely Vegetated Concave Surf. (B8) ☑ Other (Explain in Remarks)	
Algal Mat or Crust (B4) □ Recent Iron Reduction in Plowed Soils (C6) □ Geomorph □ Iron Deposits (B5) □ Thin Muck Surface (C7) ✓ FAC-Neutr □ Inundation Visible on Aerial Imagery (B7) □ Gauge or Well Data (D9) ✓ FAC-Neutr Sparsely Vegetated Concave Surf. (B8) □ Other (Explain in Remarks) ✓	
Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorph Iron Deposits (B5) Thin Muck Surface (C7) ✓ FAC-Neutr Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) ✓ FAC-Neutr Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) ✓ Field Observations: Surface Water Present? Yes No X	
Algal Mat or Crust (B4) □ Recent Iron Reduction in Plowed Soils (C6) □ Geomorph □ Iron Deposits (B5) □ Thin Muck Surface (C7) ✓ FAC-Neutr □ Inundation Visible on Aerial Imagery (B7) □ Gauge or Well Data (D9) ✓ FAC-Neutr ○ Sparsely Vegetated Concave Surf. (B8) ○ Other (Explain in Remarks) ✓ Field Observations:	
Algal Mat or Crust (B4) □ Recent Iron Reduction in Plowed Soils (C6) □ Geomorph □ Iron Deposits (B5) □ Thin Muck Surface (C7) ✓ FAC-Neutr □ Inundation Visible on Aerial Imagery (B7) □ Gauge or Well Data (D9) ✓ FAC-Neutr ○ Sparsely Vegetated Concave Surf. (B8) ○ Other (Explain in Remarks) ✓ FAC-Neutr ✓ Surface Water Present? Yes No X Depth (inches): ✓ Water Table Present? Yes No X Depth (inches): ✓ Wetland Hydrology Prov Saturation Present? Yes X No Depth (inches): 18 Wetland Hydrology Prov	esent? Yes No_X_
Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorph Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutr Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) FAC-Neutr Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): 18 Saturation Present? Yes X No Depth (inches): 18 Wetland Hydrology Pro	esent? Yes No_X_
Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorph Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutr Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) FAC-Neutr Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Wetland Hydrology Pro Field Observations: No X Depth (inches): Wetland Hydrology Pro Water Table Present? Yes No X Depth (inches): 18 Saturation Present? Yes X No Depth (inches): 18 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Stravialable:	esent? Yes No_X
Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorph Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutr Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) FAC-Neutr Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Other (Explain in Remarks) Field Observations:	esent? Yes No_X_
Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorph Iron Deposits (B5) Thin Muck Surface (C7) FAC-Neutr Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) FAC-Neutr Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Wetland Hydrology Provide the Present? Yes No X Depth (inches): Wetland Hydrology Provide the Present? Yes X No Depth (inches): 18 Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	esent? Yes No_X_
Algal Mat or Crust (B4) Recent Iron Reduction in Plowed Soils (C6) Geomorph Iron Deposits (B5) Thin Muck Surface (C7) ✓ FAC-Neutr Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9) ✓ FAC-Neutr Sparsely Vegetated Concave Surf. (B8) Other (Explain in Remarks) Field Observations:	esent? Yes No_X_



Project/Site: G	Fretna Bottoms		City/Coun	ty:	Sarpy Cour	nty S	Sampling Date	ə: 4/3	30/201	5	
Applicant/Owner:	Lyman-Riche	y Corporation			State	: NE	Sampling Poir	nt: S	-47		
Investigators:	Ben Fisher	Austin Zigl	er		Section, Tov	vnship, Range	S 16 T 1	3N	R 10	ЭE	
Landform (hillslope	e, terrace, etc.):	Depression			Local Rel	ief (concave, co	nvex, none):	Conc	ave		
Slope(%): 0	Lat:	41.0984318044372	Long:	-96.29376092	46499	Datum:	NAD 1983				
Soil Map Unit Nam	ie: Gibbon loa	amy fine sand, overwash, oo	ccasionally floo	oded		NWI Classificat	ion: None				
Are climatic / hydro	ologic conditions of	on the site typical for this tim	ne of year?	Yes X	No	(If No, expla	ain in Remark	s)			
Are Vegetation	, Soil,	Hydrology, significa	ntly disturbed?		Are "Normal	Circumstances"	present?	Yes	х	No	
Are Vegetation	, Soil,	Hydrology, naturally	problematic?		(If needed,	explain any ans	wers in Rema	arks.)			
SUMMARY O		- Attach a site man s	howing sa	mnlina noi	nt locatio	ns transect	s importa	nt fe	ature	es et	c
Hydrophytic Vege	etation Present?	Yes X No			<u>Int loodilo</u>				atare	, 01	
Hydric Soil Prese	ent?	Yes X No	Is the S	ampled Area							
Wetland Hydrolog	gy Present?	Yes X No	within a	a wettand?		Yes X	No				
Remarks:											
The area characte hydrology criteria.	erized by this data	a form is an emergent wetla	nd area. The a	area displayed	indicators of	f hydrophytic ve	getation, hydr	ic soils	s, and y	wetland	b
VEGETATION	L Use scienti	ific names of plants.	Absolute <u>% Cover</u>	Dominant Species	Indicator Status	Dominance -	Test Workshe	eet:			
Tree Stratum						Number of D	ominant Spec	vies			
Shrub Stratum						That Are OB	L, FACW, or F	FAC:		1	(A)
Herb Stratum	(Plot size	e 6 Ft)				Total Numbe	r of Dominant				
Eleocharis	palustris	(<u>)</u>	50	Y	OBL	Species Acro	ss all Strata:			1	(B)
Alisma sub	cordatum		10	N	OBL	Boroont of D	minant Spaci	ioo			_
Phalaris are	undinacea		10	Ν	FACW	That Are OBL	, FACW, or F	AC:	1(00.0%	(A/B)
			70	=Total Cover		Drevelance	nday Markak				
Vine Stratum								leet:		h. h. a	
							50ver 01: 60	<u>x</u>	1 =	60	
								x	2 =	20	
								x	3 =	0	
						FAC species	0	x	4 =	0	
						FACU specie	es	x	5 =	0	
						UPL species		^	. 0 –	0	
						Column Total	ls:70) (A	.)	80	(B)
						Prevale	ence Index = E	3/A=		1.14	
						Hydrophytic	Vegetation In	dicato	ors:		
						X Rapid Te	st for Hydroph	nytic V	egetat	ion	
						X Dominan	ce Test > 50%	6			
						X Prevalen	ce Index ≤ 3.0)			
						Morpholo	ogical Adaptat	ions (Provid	e supp	orting
						data in R	emarks or on	a sepa	arate s	heet)	loin)
								lic veg		i (⊏xµ	nain)
						be present,	unless disturb	ed or p	and ny probler	natic.	y must
						Hydroph Vegetation P	ytic Present? Y	′es	X N	lo	
Remarks: (Include	e photo numbers l	here or on a separate sheet	.)								

The area displayed dominant hydrophytic vegetation and displayed approximately 20% bare ground.



Sence of Indicators.) Texture Remarks ² Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils: ³ Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Texture Remarks *Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils: 3 Coast Prairie Redox (A16) 1 Iron-Manganese Masses (F12) 0 Dark Surface (S7) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Iexture Remarks 2Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils: 3 Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
 Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils: ³ Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF12) ✓ Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Indicators for Problematic Hydric Soils: 3 Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF12) ✓ Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
 Coast Prairie Redox (A16) Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
 Iron-Manganese Masses (F12) Dark Surface (S7) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
 Dark Surface (S7) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
 Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
 Very Shallow Dark Surface (TF12) Other (Explain in Remarks) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
 Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
disturbed or problematic.
dria Sail Brasant? Vac. V No.
Secondary Indicators (minimum of two require
Drainage Patterns (B10)
Dry-Season Water Table (C2)
Crayfish Burrows (C8)
Saturation Visible on Aerial Imag.(C9)
Stunted or Stressed Plants (D1)
Geomorphic Position (D2)
FAC-Neutral Test (D5)
Vetland Hydrology Present? Yes X No

Project/Site: Gretna Bottoms	City/Coun	ty:	Sarpy Cour	nty S	Sampling Date:	4/30/20	015	
Applicant/Owner: Lyman-Richey Corporation			State	: NE	Sampling Point:	S-48		
Investigators: Ben Fisher Austin Zigler			Section, Tov	vnship, Range	S 16 T 13N	R	10E	
Landform (hillslope, terrace, etc.): Depression			Local Rel	ief (concave, co	nvex, none): C	onvex		
Slope(%): 1-2 Lat: 41.0988014123167	Long:	-96.293570078	84608	Datum:	NAD 1983			
Soil Map Unit Name: Gibbon loamy fine sand, overwash, occa	asionally floc	oded		NWI Classificat	ion: None			
Are climatic / hydrologic conditions on the site typical for this time	of year?	Yes X	No	(If No, expla	ain in Remarks)			
Are Vegetation, Soil, Hydrology, significantl	y disturbed?	,A	Are "Normal	Circumstances"	present? Yes	x	No	
Are Vegetation, Soil, Hydrology, naturally p	roblematic?		(If needed	evolain any ans	wers in Remarks	:)		
SUMMARY OF FINDINGS - Attach a site man she	wing cor	mpling poi	nt locatio	ne transact		footu	ros of	~
Hydrophytic Vegetation Present? Yes X No	Jwilly Sal			115, transect	is, important	Teatu	103, 01	
Hydric Soil Present? Yes No X	Is the S	ampled Area						
Wetland Hydrology Present? Yes No X	within a	a Wetland?		Yes	No X			
Remarks:								
The area characterized by this data form is an upland area locate hydric soil and wetland hydrology; however, the area met hydrop	ed adjacent t hytic vegeta	to the wetland tion criteria.	characterize	ed by S-49. The	area failed to di	splay in	dicators	of
VEGETATION Use scientific names of plants.	<u>Absolute</u> <u>% Cover</u>	Dominant Species	Indicator Status	Dominance 1	Fest Worksheet	:		
Tree Stratum (Plot size: <u>30 Ft</u>)				Number of D	ominant Species		4	(A)
Populus deltoides	30	Y	FAC	That Are OBI	L, FACW, or FAC):	4	_ (A)
Shrub Stratum (Plot size: 15Ft)	30	=Total Cover		Total Number Species Acro	r of Dominant ss all Strata:		5	(B)
Ceonathus cuneatus	20	Y	FAC					
Cornus drummondii	10	Y	FAC	Percent of Do That Are OBI	minant Species	: _	80.0%	(A/B)
Salix interior	10	Y	FACW		.,,,,,			
	40	=Total Cover		Prevalence I	ndex Workshee	t:		
Herb Stratum (Plot size: 6 Ft)				Total % C	Cover of:	Mult	iply by:	
Bromus inermis	70	Y	FACU	OBL species	0	_ x 1 =	0	
Elymus virginicus	20	N	FACW	FACW specie	es <u>40</u>	_ x 2 =	80	
Rumex altissimus		N	FACW	FAC species	60	_ x 3 =	180	
		N	FACU	FACU specie	es <u>72</u>	_ x 4 =	288	
Vino Strotum	102	=Total Cover		UPL species	0	x 5 =	0	
				Column Total	s:172	(A)	548	(B)
				Prevale	ence Index = B/A	=	3.19	
				Hydrophytic	Vegetation India	ators:		
				Rapid To	et for Hydrophyti		ation	
						s vegei	allon	
					ce lest > 50%			
				Prevalen	ce index ≤ 3.0	(5		
				data in R	emarks or on a s atic Hvdrophytic ^v	s (Prov eparate √egetat	ide supp sheet) ion (Exi	plain)
				Indicators of be present.	hydric soil and v	vetland or prob	hydrolog	y must
				Hydroph Vegetation P	ytic resent? Yes	x	No	
Remarks: (Include photo numbers here or on a separate sheet.)							<u> </u>	

The area is dominated by hydrophytic vegetation.



Profile Descr	iption: (Des	cribe to the	depth nee	eded to document	the ind	icator or	confirm t	the absence of Indicators.)			
Depth (inchos)	Color	Matrix	0/	Color (moist)		atures	1002	Toxturo	Pom	orke	
	40\/D					Туре	<u>L00 -</u>			ains	
<u> </u>	10YR	3/1	70						Mixed Met		
14 to 18		3/1								LIIX	
14 to 18	10YR	4/1		7.51K 4/6	5			SANDT LOAM		IIIX	
Type. C=Con	icentration, L	=Depletion,	RIVIERedu	iced Martix, CS=C	Jvered of		Sanu Gia	ans. ² Location. FL=Fore Lining	ivi=iviatrix.		
Hydric Soil I	ndicators:							Indicators for Problematic H	ydric Soils	3: ³	
Histosol (A	1)		l	Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A16)			
Histic Epipe	edon (A2)		[Sandy Redox (St	5)			Iron-Manganese Masses (F12	<u>'</u>)		
Black Histic	c (A3)		[Stripped Matrix (S6)			Dark Surface (S7)			
Hydrogen S	Sulfide (A4)		[Loamy Mucky Mi	neral (F1)						
Stratified La	ayers (A5)		[Loamy Gleyed M	atrix (F2)				-12)		
2 cm Muck	(A10)		[Depleted Matrix ((F3)			Other (Explain in Remarks)			
Depleted B	elow Dark Sur	face (A11)	[Redox Dark Surf	ace (F6)						
Thick Dark	Surface (A12)		[Depleted Dark S	urface (F7)					
Sandy Muc	ky Mineral (S1)]	Redox Depressio	ons (F8)			³ Indicators of hydrophytic veget	ation and		
5 cm Muck	y Peat or Peat	(S3)	·		()			disturbed or problemat	ent, uniess ic.		
Restricti	ive I aver (i	if observe	d):								
Type:			.								
Depth (inch	nes):							Hydric Soil Present?	/es	No	Х
		o to display i		nyaric soli.							
HYDROLOG	Y										
Wetland Hyd	Irology Indi	icators:	required.	check all that apply	<i>d</i>			Secondary Indicators (min	imum of two	requir	(ha
			required,		/)	(P0)				Jicquii	cu)
High Water	ater (A1) r Table (A2)				a (B13)	(БЭ)			(B10)		
	(43)				Plants (B1	14)		Dry-Season Water	Table (C2)		
Water Mark	(7.0) (s (B1)			Hvdrogen Su	fide Odor	(C1)		Crayfish Burrows (0	28)		
Sediment D	Deposits (B2)			Oxidized Rhiz	ospheres	along Livir	ng Roots (0	C3) Saturation Visible o	n Aerial Imaç	g.(C9)	
Drift Depos	sits (B3)			Presence of F	Reduced I	ron (C4)		Stunted or Stressed	d Plants (D1)		
Algal Mat o	or Crust (B4)			Recent Iron F	Reduction	in Plowed	Soils (C6)	Geomorphic Positio	on (D2)		
Iron Depos	its (B5)			Thin Muck Su	urface (C7	")		FAC-Neutral Test (D5)		
Inundation	Visible on Aer	ial Imagery (E	57)	Gauge or We	ell Data (D	9)					
Sparsely Ve	egetated Conc	ave Surf. (B8)	Other (Explai	n in Rema	arks)					
Field Observ	ations:										
Surface Wate	er Present?	Yes	N	o X Depth	(inches):			_			
Water Table	Present?	Yes	N	o X Depth	(inches):						
Saturation Pr	resent?	Yes	N	o X Depth	(inches):			Wetland Hydrology Present?	Yes	No	_X
Describe Record	ded Data (stre	am gauge, me	onitoring wel	l, aerial photos, previ	ous inspe	ctions), if a	vailable:				
Remarks:											
The area failed	to meet wetla	nd hydrology	criteria. The	area is elevated abo	ve the adj	acent wetla	and.				

Project/Site:	Gretna Bottoms		City/Count	ty:	Sarpy Cour	nty	Sam	pling Date:	4/30/20	015	
Applicant/Owner	r: Lyman-Riche	y Corporation			State	: NE	Sam	pling Point:	S-49		
Investigators:	Ben Fisher	Austin Zigle	er		Section, Tov	vnship, Rang	e S1	6 T 13N	R	10E	
Landform (hillslo	ope, terrace, etc.):	Depression			Local Rel	ief (concave,	conve	k, none): N	one		
Slope(%): 0	Lat:	41.0987986731252	Lona: -	96.29386673	21247	Datum:	NAD	1983			
Soil Map Unit Na	ame: Gibbon lo	amy fine sand overwash oc		ded		NWI Classifi	cation:	None			
Are climatic / by		on the site typical for this tim	e of year?		No	(If No. ex	volain ir	Remarks)			
Are Vegetation	Soil		thy disturbed?			 Circumstance	oc" pro	cont? Voc	v	No	
Are Vegetation	, Soil,	Ludrology, significat		,	Ale Nollia	Circumstance	es pre		~		
Are vegetation	, 5011,	Hydrology, naturally	problematic?		(If needed,	explain any a	answers	s in Remarks	;.)		
SUMMARY	OF FINDINGS	 Attach a site map sh 	nowing sar	npling poi	nt locatio	ns, transe	ects, i	mportant	featu	res, et	C.
Hydrophytic Ve	egetation Present?	Yes X No	le the S	ampled Area							
Hydric Soil Pre	esent?	Yes X No	within a	Wetland?		Yes	х	No			
Wetland Hydro	ology Present?	Yes X No					~				
Remarks:											
The area chara	acterized by this data	a form is a forested wetland.	The area disp	layed indicato	ors of hydrop	hytic vegetat	ion, hyd	dric soils, and	d wetlan	id hydrol	ogy
chiena.											
						1					
VEGETATIO	DN – Use scient	ific names of plants.	Absolute % Cover	Dominant Species	Indicator Status	Dominono	o Toot	Workshoot			
Tree Stratum) (Plot size	o: 20 Et)	<u></u>		<u></u>	Number of	f Domir				
Populus	deltoides	e. <u>50 Ft</u>)	70	Y	FAC	That Are C	OBL, FA	ACW, or FAC):	5	(A)
						-					
Chrub Stratu				=10tal Cover		Total Num	ber of [cross a	Dominant		5	(B)
<u>Siliub Silaiu</u>	<u>III</u> (Plot size	e: <u>15Ft</u>)	20	V	EAC	Opecies A	0005 0	n Otrata.	_	5	(D)
Salix inte	arior			- <u>ř</u>	FAC FACW	Percent of	Domin	ant Species		100.0%	(Δ/R)
					TAON	That Are C	OBL, FA	CW, or FAC	: —	100.070	_ (7,0)
Liente Otrecture				_=I otal Cover		Prevalenc	e Inde	x Workshee	t:		
Herb Stratum	(Plot size	e: <u>6 Ft</u>)				Total		or of:	Multi	inly by:	
Phalaris	arundinacea			- <u>Y</u>	FACW		/0 COVE	0	$\frac{10000}{x1}$	0 0	
Carex fe				Y	FACW		es	115	_ x 2 =	230	
Rumera	altissimus			N	FACW	FACW spe	ecles		_ ^ 2 _	200	
Solidado	a digantea		5	- <u>N</u>	FACW	FAC speci	es	90		270	
	giganioa		105			FACU spe	ecies	0	_ x 4 =	0	
Vine Stratum						UPL speci	es	0	_ x 5 =	0	
<u>vine otratuir</u>	<u>. </u>					Column To	otals:	205	(A)	500	(B)
						Prev	valence	Index = B/A	_	2.44	
						L barden om barde	:. \/	tation India			
						nyarophyt	Track (ators:		
						Каріа	l est to	r Hydropnyti	c vegeta	ation	
						X Domin	nance T	est > 50%			
						X Preval	lence Ir	ndex ≤ 3.0			
						Morph	ologica	I Adaptation	s (Provi	ide supp	orting
						Proble	matic F	IKS OF OH A S	eparale /enetati	on (Exi	olain)
									votlond l		
						be preser	nt, unles	ss disturbed	or proble	ematic.	y must
						Hydro Vegetation	phytic n Prese	ent? Yes	х	No	
Remarks: (Inclu	ude photo numbers	here or on a separate sheet.)								_
The area displa	ayed dominant hydro	ophytic vegetation.									



Profile Descr	iption: (Dese	cribe to the	depth ne	eded to documen	t the indi	cator or	confirm t	he absence of Indicators.)	
Depth	Calar	Matrix	0/			atures	1 2	Tautura	Demeric
		(moist)	<u>%</u>	Color (moist)	%	Type	LOC 2		Remarks
$\frac{0 \text{ to } 3}{2 \text{ to } 12}$		3/1	-100		10				
3 to 12		5/1	90	7.51R 4/6	<u> </u>				Mixed Metrix
12 to 18		5/1 2/1	00	7.51K 4/0	5	U	IVI		Mixed Matrix
12 10 18		3/ I		and Monthly CC C		Cootod	Croi	SANDT CLAT LOAM	
•Type. C=Cor	icentration, D		RIVI=Reut	iceu Martix, CS=C	overed of	Coaled	Sanu Grai		g, m=matrix.
Hydric Soil I	indicators:			Sandy Gleyed M	atrix (S4)			Indicators for Problematic	<u>Hydric Soils:</u> ³
Histic Epipe	edon (A2)			Sandy Redox (S	5)				12)
Black Histi	c (A3)			Stripped Matrix (S6)				12)
Hvdrogen S	Sulfide (A4)			Loamy Mucky M	ineral (F1)			Dark Surface (S7)	
Stratified L	avers (A5)			Loamy Gleved M	latrix (F2)			Very Shallow Dark Surface	(TF12)
	(A10)				(E2)			Other (Explain in Remarks)	
	elow Dark Sur	face (A11)			(F3)				
Thick Dark	Surface (A12)				urface (F7))			
Sandy Muc	ky Mineral (S1)		Redox Depressio	ons (F8)	,		³ Indicators of hydrophytic veg	etation and
5 cm Muck	y Peat or Peat	, (S3)						wetland hydrology must be pro disturbed or problem	atic.
Restrict	ive Laver (i	f observe	d):						
Type:									
Depth (incl	nes):							Hydric Soil Present?	Yes X No
HYDROLOG	Y								
Wetland Hyd Primary Indic	drology Indi ators (minim	cators: um of one is	s required;	check all that appl	y)			Secondary Indicators (m	inimum of two required)
Surface Wa	ater (A1)			Water-Staine	d Leaves ((B9)		Surface Soil Crac	
High Water	r Table (A2)			Aquatic Faun	na (B13)			Drainage Pattern	s (B10)
Saturation	(A3)			True Aquatic	Plants (B1	4)		Dry-Season Wate	er Table (C2)
Water Marl	ks (B1)			Hydrogen Su	lfide Odor	(C1)		Crayfish Burrows	(C8)
Sediment [Deposits (B2)			Oxidized Rhi	zospheres	along Livir	g Roots (C	C3) Saturation Visible	on Aerial Imag.(C9)
	sits (B3)			Presence of	Reduced Ir	ron (C4)		Stunted or Stress	ed Plants (D1)
Algal Mat c	or Crust (B4)				Reduction i	in Plowed S	Soils (C6)	Geomorphic Posi	tion (D2)
	iits (B5)	- 1 1		Thin Muck S	urface (C7)		✓ FAC-Neutral Test	(D5)
	VISIBle on Aeri	ai imagery (E	57) \	Gauge of We	in in Roma	9) urke)			
		ave Sun. (Bo)			1115)			
Surface Wate	ar Present?	Ves	N	o X Denth	(inches):				
Water Table	Present?	Yes	N	lo X Depth	(inches):				
Saturation P	resent?	Yes	XN	o Depth	(inches):		3	Wetland Hydrology Present	? Yes <u>X</u> No
Describe Recor	ded Data (strea	am gauge, m	onitoring we	II, aerial photos, previ	ious inspec	ctions), if av	/ailable:		
Remarks:									
The area displa	ayed indicators	of wetland h	ydrology.						

Project/Site:	Gretna Bottoms		City/Coun	ty:	Sarpy Cour	nty	Samp	ling Date:	4/30/20)15	
Applicant/Owner	r: Lyman-Riche	ey Corporation			State	: NE	Samp	oling Point:	S-50		
Investigators:	Ben Fisher	Austin Zigl	er		Section, To	wnship, Range	e S 16	6 T 13N	R	10E	
Landform (hillslo	ope, terrace, etc.):	Depression			Local Re	lief (concave,	convex	, none): N	one		
Slope(%): 0	Lat:	41.0994179045042	Lona:	-96.29364318	810679	Datum:	NAD	1983			
Soil Map Unit Na	ame: Gibbon lo	amy fine sand overwash or		nded		NWI Classific	ation:	None			
Are climatic / by		on the site typical for this tim	ne of year?	Yes X	No	(If No ex	nlain in	Remarks)			
Are Vegetation	Soil	Hydrology significa	ntly disturbed?	, ites <u></u>	Are "Normal		s" nres	ent? Ves	×	No	
Are Vegetation	, Soil,	Hydrology, significa			Ale Nollia	Circumstance	s pies			_ 110 _	
Are vegetation	, 3011,	, Hyurulugy, haluraliy	problematic		(If needed,	explain any a	nswers	in Remarks	.)		
SUMMARY	OF FINDINGS	 Attach a site map s 	howing sar	mpling poi	int locatio	ons, transe	cts, ir	nportant	featu	res, et	с.
Hydrophytic Ve	egetation Present?	Yes <u>X</u> No	ls the S	ampled Area							
Hydric Soil Pre	esent?	Yes X No	within a	a Wetland?	a	Yes	х	No			
Wetland Hydro	ology Present?	Yes X No							_		
Remarks:											
The area chara indicators of hy	acterized by this dat drophytic vegetatio	a form is a scrub-shrub wetland l	and located ad	ljacent to the ria.	forested wet	and character	ized by	S-49. The a	area dis	played	
,		, ,	,								
		····	Absolute	Dominant	Indicator						
VEGETATIC	DN - Use scient	ific names of plants.	% Cover	Species	Status	Dominance	e Test	Worksheet	:		
Tree Stratum	<u>n</u>					Number of	Domina	ant Species			<i>(</i> •)
Shrub Stratu	IM (Plot siz	e [.] 15Ft)				That Are O	BL, FA	CW, or FAC	;:	4	(A)
Cornus	drummondii	<u> </u>	20	Y	FAC	Total Numb	per of D	ominant			
Salix inte	erior		20	Y	FACW	Species Ac	ross all	Strata:		4	(B)
			40	=Total Cover	r						_
Herb Stratum	<u>n</u> (Plot siz	e 6 Ft)				Percent of That Are O	Domina BL. FA	int Species CW. or FAC	: _	100.0%	(A/B)
Phalaris	arundinacea	<u> </u>	70	Y	FACW		,				
Carex fe	estucacea		20	Y	FACW	Prevalence	e Index	Workshee	t:		
Rumex a	altissimus		10	N	FACW	Total %	6 Cover	of:	Multi	ply by:	
			100	=Total Cover	r	OBL specie	es	0	x 1 =	0	
Vine Stratum	<u>1</u>					FACW spec	cies	120	x 2 =	240	
						FAC specie	es	20	x 3 =	60	
						FACU spe	cies	0	x 4 =	0	
						UPL specie	es	0	x 5 =	0	
						Column To	tole	140	(A)	300	(B)
						Drov		Index D/A	_`´_	0.14	
						FIEV				2.14	
						Hydrophyti	c Vege	tation Indic	ators:		
						Rapid	Test for	Hydrophyti	c Vegeta	ation	
						X Domina	ance Te	est > 50%			
						X Prevale	ence In	dex ≤ 3.0			
						Morpho	ological	Adaptation	s (Provi	ide supp	orting
						data in	Remar	ks or on a s	eparate	sheet)	
						Probler	matic H	yaropnytic v	/egetati	on (Exp	piain)
						Indicators be present	of hydr t, unles	s disturbed	or proble	nydrolog ematic.	y must
						Hydrop Vegetation	ohytic Prese	nt? Yes	x	No	
Remarks: (Inclu	ude photo numbers	here or on a separate sheet	.)			1				·	
The area displa	ayed dominant hydr	ophytic vegetation.									



Profile Descr	iption: (Des	cribe to the	depth nee	ded to document	the indi	cator or	confirm t	the absence of Indicators.)	
Depth		Matrix		R	edox Fea	atures			
(inches)	Color	· (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 4	10YR	3/1	100					SANDY LOAM	
4 to 15	10YR	3/1	95	7.5YR 4/6	5	С	Μ	SANDY LOAM	
15 to 18	10YR	4/1	95	7.5YR 4/6	5	С	М	SANDY LOAM	
¹ Type: C=Cor	centration, E	D=Depletion,	RM=Redu	ced Martix, CS=Co	overed or	Coated	Sand Gra	ins. ² Location: PL=Pore I	ining, M=Matrix.
Hydric Soil I	indicators:		_					Indicators for Problema	atic Hydric Soils: ³
Histosol (A	1)		L	Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A	16)
Histic Epipe	edon (A2)			Sandy Redox (S5	5)			Iron-Manganese Masse	es (F12)
Black Histi	c (A3)			Stripped Matrix (S	S6)			Dark Surface (S7)	
Hydrogen S	Sulfide (A4)			Loamy Mucky Mi	neral (F1)				
Stratified L	ayers (A5)			Loamy Gleyed M	atrix (F2)			Very Shallow Dark Surf	ace (TF12)
2 cm Muck	(A10)		Г	Depleted Matrix (F3)			Other (Explain in Rema	rks)
Depleted B	elow Dark Su	face (A11)	Γ	Redox Dark Surfa	ace (F6)				
Thick Dark	Surface (A12)		Г	Depleted Dark Si	urface (F7))			
Sandy Muc	ky Mineral (S	1)				/		³ Indicators of hydrophytic	vegetation and
5 cm Muck	v Peat or Peat	: (S3)	L		115 (1 0)			wetland hydrology must b disturbed or prol	e present, unless plematic.
Restrict	ive Laver (if observe	d):						
Type:			,						
Depth (incl	nes):							Hydric Soil Present?	Yes X No
Remarks:	,								
HYDROLOG	• •								
Wetland Hard	 Jacoba any Tarak								
Primary Indic	ators (minim	um of one is	required; c	check all that apply	/)			Secondary Indicators	s (minimum of two required)
Surface W/	ater (A1)			Water-Staine	d Leaves ((B9)		Surface Soil	Cracks (B6)
High Water	r Table (A2)			Aquatic Fauna	a (B13)	(20)		Drainage Pat	tterns (B10)
Saturation	(A3)			True Aquatic	Plants (B1	4)		Dry-Season	Water Table (C2)
Water Marl	ks (B1)			Hydrogen Sul	fide Odor (, (C1)		Crayfish Bur	rows (C8)
Sediment D	Deposits (B2)			Oxidized Rhiz	ospheres	along Livir	ng Roots (0	C3) Saturation Vi	sible on Aerial Imag.(C9)
Drift Depos	sits (B3)			Presence of F	Reduced In	on (C4)		Stunted or St	tressed Plants (D1)
Algal Mat c	or Crust (B4)			Recent Iron R	eduction i	n Plowed S	Soils (C6)	Geomorphic	Position (D2)
Iron Depos	its (B5)			🗌 Thin Muck Su	urface (C7))		✓ FAC-Neutral	Test (D5)
Inundation	Visible on Aer	ial Imagery (B	7)	Gauge or We	ll Data (DS	9)			
Sparsely V	egetated Cond	ave Surf. (B8)		Other (Explain	n in Rema	rks)			
Field Observ	ations:								
Surface Wate	er Present?	Yes	No	Depth	(inches):				
Water Table	Present?	Yes	No	Depth	(inches):				
Saturation P	resent?	Yes	<u> X Nc</u>	Depth	(inches):		4	Wetland Hydrology Pres	ent? Yes <u>X</u> No
Describe Recor	ded Data (stre	am gauge, mo	nitoring well	, aerial photos, previ	ous inspec	ctions), if a	vailable:		
Remarks:									
The area displa	ayed indicator	s of wetland hy	/drology.						

Project/Site:	Gretna Bottoms		City/Coun	ty:	Sarpy Cour	nty	Sampling Date:	4/30/20	015	
Applicant/Owner	r: Lyman-Riche	y Corporation			State	: NE	Sampling Point	: S-51		
Investigators:	Ben Fisher	Austin Zi	gler		Section, Tov	wnship, Range	S 16 T 13	N R	10E	
Landform (hillslo	ope, terrace, etc.):	Depression			Local Re	lief (concave, co	onvex, none):	Concave		
Slope(%): 0	Lat:	41.1028953208251	Long:	-96.29442628	5091	Datum:	NAD 1983			
Soil Map Unit Na	ame: Gibbon loa	amy fine sand, overwash,	occasionally floo	oded		NWI Classifica	tion: None			
Are climatic / hy	drologic conditions	on the site typical for this ti	me of year?	Yes X	No	(If No, expl	ain in Remarks)			
Are Vegetation	, Soil,	Hydrology, signific	antly disturbed?	,	Are "Normal	Circumstances	" present? Ye	es X	No	
Are Vegetation	, Soil,	Hydrology, natural	ly problematic?		(If needed	explain any any	swers in Remar	ks)		
SIIMMADV		Attach a site man	showing sa	mpling poi	nt locatio	one transoc	te importar	t foatu	iros of	^
Hydrophytic Ve	OF FINDINGS	Yes X No	silowing sai	inpling poi		115, 11 al 1500	is, importar	li leatu	1 6 5, et	U .
Hvdric Soil Pre	esent?	Yes X No	Is the S	ampled Area						
Wetland Hydro	ology Present?		_ within a	a Wetland?		Yes)	X No			
Pomarka:			-							
The area chara soils, and wetla	cterized by this data and hydrology.	a form is an emergent wetl	and located in a	i depression. T	The area dis	played indicator	rs of hydrophytic	; vegetati	on, hydri	ic
			Abooluto	Dominant	Indiantar					
VEGETATIC	DN – Use scienti	fic names of plants.	<u>Absolute</u> <u>% Cover</u>	Species	Status	Dominance	Test Workshee	et:		
Tree Stratum	<u>1</u>					Number of D	Dominant Specie	es		
Shrub Stratu	m					That Are OB	BL, FACW, or FA	\C:	1	(A)
Herb Stratum	n (Plot size	e 6 Et)				Total Numbe	er of Dominant			
Eleochar	ris palustris	/ <u></u> /	55	Y	OBL	Species Acro	oss all Strata:		2	(B)
Solanum	rostratum		20	Y	FACU	Borcont of D	ominant Spacio			
Digitaria	sanguinalis		10	Ν	FACU	That Are OB	L, FACW, or FA	.C:	50.0%	(A/B)
Rumex a	altissimus		5	N	FACW	Drovalance	Inday Markaha			
			90	=Total Cover		Tetal 0/	Course of	et:	المراجبة المراجب	
Vine Stratum	<u> </u>						Cover of:	1000000000000000000000000000000000000	1019 by: 55	
						OBL species	<u> </u>	x2=	10	
						FACW speci	es	 	0	
						FAC species	30 <u>- 30</u>		120	
						FACU speci	les		0	
						UPL species				
						Column Tota	als: <u>90</u>	(A)	185	<u>(</u> B)
						Preval	ence Index = B/	A=	2.06	
						Hydrophytic	Vegetation Ind	icators:		
						Rapid Te	est for Hydrophy	rtic Veget	ation	
						Dominar	nce Test > 50%			
						X Prevaler	nce Index ≤ 3.0			
						Morphole	ogical Adaptatio Remarks or on a	ns (Prov separate	ride supp e sheet)	orting
						Problem	atic Hydrophytic	: Vegetati	ion (Exp	plain)
						Indicators of be present,	f hydric soil and unless disturbe	wetland d or probl	hydrolog lematic.	y must
						Hydroph Vegetation F	nytic Present? Ye	s <u>X</u>	No	
Remarks: (Inclu The area meets	ude photo numbers l s hydrophytic vegeta	here or on a separate she ation criteria.	et.)							



Profile Descr	iption: (Des	cribe to the	depth nee	ded to docume	ent the indic	cator or	confirm	the absence of Indicators.)	
Depth (inches)	Colo	mainx	%	Color (moist)		Type 1	Loc 2	Texture	Remarks
0 to 22	10VP	2 / 1	100			1)00			
22 to 28	10YR	2/1	95	7 5YR 4/6	5	0	M		
¹ Type: C=Con	centration, [D=Depletion,	RM=Reduc	ced Martix, CS=	Covered or	Coated S	Sand Gra	ains. ² Location: PL=Pore Lining, I	M=Matrix.
Hydric Soil I	ndicators:	- r ,						Indicators for Problematic Hy	dric Soils ^{, 3}
Histosol (A	1)			Sandy Gleyed	Matrix (S4)				
Histic Epipe	edon (A2)			Sandy Redox	(S5)			Coast Prairie Redox (AT6) Iron-Manganese Masses (E12)	
Black Histic	c (A3)			Stripped Matrix	x (S6)				
Hydrogen S	Sulfide (A4)			Loamy Mucky	Mineral (F1)				
Stratified La	ayers (A5)		Γ	Loamy Gleyed	Matrix (F2)			Very Shallow Dark Surface (TF	12)
2 cm Muck	(A10)		Γ	Depleted Matr	ix (F3)			Other (Explain in Remarks)	
Depleted B	elow Dark Su	rface (A11)	Γ	Redox Dark S	urface (F6)				
Thick Dark	Surface (A12))	Γ	Depleted Dark	Surface (F7)				
Sandy Muc	ky Mineral (S	1)	Γ	Redox Depres	sions (F8)			³ Indicators of hydrophytic vegeta	tion and
5 cm Muck	y Peat or Peat	, t (S3)	L					wetland hydrology must be preser disturbed or problematic	nt, unless
Restrict	ive Layer (if observe	d):						
Туре:								Hydria Sail Procent?	
Depth (inch	nes):								
and surface sa	turation. Y	inotowa							
Primary Indic	ators (minim	um of one is	required o	check all that ap	vla)			Secondary Indicators (minin	num of two required)
Surface W/s	ator (A1)		roquirou, e	Water-Stai	ned Leaves (F	B9)			(B6)
High Water	Table (A2)			Aquatic Fa	una (B13)	53)		Drainage Patterns (B	10)
Saturation	(A3)			True Aquat	tic Plants (B14	4)		Dry-Season Water Ta	able (C2)
U Water Mark	(B1)			Hydrogen S	Sulfide Odor (C1)		Crayfish Burrows (C8	3)
Sediment D	Deposits (B2)			Oxidized R	hizospheres a	along Livir	ig Roots (C3) Saturation Visible on	Aerial Imag.(C9)
Drift Depos	its (B3)			Presence o	of Reduced Irc	on (C4)		Stunted or Stressed	Plants (D1)
Algal Mat o	or Crust (B4)			Recent Iron	n Reduction ir	n Plowed S	Soils (C6)	Geomorphic Position	(D2)
Iron Depos	its (B5)			Thin Muck	Surface (C7)			FAC-Neutral Test (D	5)
	Visible on Aer	ial Imagery (B	7)	Gauge or V	Well Data (D9) 			
		cave Sun. (B8)		lain in Remar	KS)			
Field Observ	ations:								
Surface Wate	Present?	Yes	No	o <u>X</u> Dep	oth (inches):			-	
Saturation Pr	Present?	Yes	NC	Dep	oth (inches):		0	Wetland Hydrology Present?	Yes X No
Describe Descri		105					U voilable:		
Describe Record	ded Data (stre	am gauge, mo	onitoring well,	, aeriai photos, pre	evious inspect	tions), if a	/allable:		
Remarks: The area displa	ayed indicator	s of wetland h	ydrology.						

Project/Site: Gretna Bottoms	City/County:	Sarpy Coun	ty S	Sampling Date:	4/30/201	15	
Applicant/Owner: Lyman-Richey Corporation		State	NE	Sampling Point:	S-52		
Investigators: Ben Fisher Austin Zigler		Section, Tow	nship, Range	S 16 T 13N	R 10	0E	
Landform (hillslope, terrace, etc.): Hillslope		Local Reli	ief (concave, co	nvex, none): C	onvex		
Slope(%): 2 Lat: 41.1028433170443	Long: -96.294	1601936801	Datum: I	NAD 1983			
Soil Map Unit Name: Gibbon loamy fine sand, overwash, occ	asionally flooded		NWI Classificat	ion: None			
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes	X No	(If No, expla	ain in Remarks)			
Are Vegetation, Soil, Hydrology, significant	y disturbed?	Are "Normal (Circumstances"	present? Yes	s X	No	
Are Vegetation, Soil, Hydrology, naturally p	roblematic?	(If needed.	explain anv ans	wers in Remarks	s.)	_	
SUMMARY OF FINDINGS - Attach a site man sho	wing samplin	a point locatio	ns transect	s important	 featur	es et	c
Hydrophytic Vegetation Present? Yes No X	Swing Sampin			.s, important	Icature		0.
Hydric Soil Present? Yes X No	Is the Sample	d Area					
Wetland Hydrology Present? Yes X No	within a wetla	na ?	Yes	No X			
The area characterized by this data form is an upland area adjac wetland hydrology; however, the area failed to meet hydrophytic	ent to the wetland ovegetation criteria.	characterized in S-5	1. The area dis	splayed indicator	s of hydrid	c soil a	nd
VEGETATION Use scientific names of plants.	Absolute Domi	nant Indicator					
Tree Stratum	<u>% Cover</u> Spe	<u>cies Status</u>	Dominance	Test Worksheet	:		
			Number of D That Are OB	ominant Species L. FACW. or FA0)):	1	(A)
Shrub Stratum				, - ,			
Herb Stratum (Plot size: <u>6 Ft</u>)			Total Number	r of Dominant		2	(B)
Lolium perenne		Y FACU				2	_(D)
Plantago rugelii	20	Y FAC	Percent of Do	minant Species	Ę	50.0%	(A/B)
	2 		That Are OBL	, FACW, or FAC	:		_ ` `
Vine Stratum	=1018	li Cover	Prevalence I	ndex Workshee	t:		
			Total % 0	Cover of:	Multip	ly by:	
			OBL species	0	x 1 =	0	
			FACW specie	es2	x 2 =	4	
			FAC species	20	x 3 =	60	
			FACU specie	es70	x 4 =	280	
			UPL species	0	x 5 =	0	
			Column Total	s: 92	(A)	344	(B)
			Prevale	ence Index = B/A		3.74	
			Hydrophytic	Vagatation India			
				et for Hydrophyti	ators:	tion	
				$\sim T_{\rm oot} \sim 50\%$	c vegetat		
			Dominan	$\frac{1}{2} \log \log x < 2.0$			
			Fievaleli	$ce index \ge 3.0$			ortina
			data in R	emarks or on a s	s (Provid separate s	ie supp sheet)	oning
			Problema	atic Hydrophytic '	√egetatio	n (Exp	plain)
			Indicators of be present, u	hydric soil and v unless disturbed	vetland hy or proble	/drolog matic.	y must
			Hydroph Vegetation P	ytic resent? Yes	1	No)	x
Remarks: (Include photo numbers here or on a separate sheet.)							

The area is dominated by upland vegetation and displayed approximately 10% bare ground.



(inches) to 6 to 10) to 16 ype: C=Conce ydric Soil Ind] Histosol (A1)	Color (moist 10YR 3 / 10YR 4 / 10YR 2 / ntration, D=Depl	t) % 2 95 2 95 1 100 etion, RM=Redu	Color (moist) 7.5YR 4/6 7.5YR 4/6	<u>%</u> 5 5	Type ¹ C C	Loc ² M M	Texture LOAMY SAND LOAMY SAND	Remarks
to 6 to 10 to 16 ype: C=Conce ydric Soil Ind	10YR 3 / 10YR 4 / 10YR 2 / ntration, D=Depl	2 95 2 95 1 100 etion, RM=Redu	7.5YR 4/6 7.5YR 4/6	5 5	C C	M	LOAMY SAND LOAMY SAND	
to 10 to 16 ype: C=Conce ydric Soil Ind Histosol (A1)	10YR4 /10YR2 /ntration, D=Depl	2 <u>95</u> 1 <u>100</u> etion, RM=Redu	7.5YR 4/6	5	С	М	LOAMY SAND	
to 16 ype: C=Conce ydric Soil Ind Histosol (A1)	10YR 2 / ntration, D=Depl	1 100 etion, RM=Redu						
ype: C=Conce ydric Soil Ind	ntration, D=Depl	etion, RM=Redu					SILTY CLAY LOAM	
ydric Soil Ind	l'antana.	,	uced Martix, CS=Co	overed or C	Coated S	Sand Grai	ns. 4_ocation: PL=Pore Lining	g, M=Matrix.
Histosol (A1)	ucators:						Indicators for Problematic H	<u>Hydric Soils:</u> ³
			Sandy Gleyed Ma	atrix (S4)			Coast Prairie Redox (A16)	
Histic Epipedo	on (A2)		Sandy Redox (S	5)			Iron-Manganese Masses (F1)	2)
Black Histic (A	A3)		Stripped Matrix (S6)				_,
] Hydrogen Sul	fide (A4)		Loamy Mucky Mi	neral (F1)				
Stratified Lave	ers (A5)		Loamy Gleved M	atrix (F2)			Very Shallow Dark Surface (1	ΓF12)
$\frac{1}{2}$ cm Muck (A	10)			(F2)			Other (Explain in Remarks)	
	iu) 	44)		(50)				
Depleted Belo	W Dark Surface (A	11)	Redox Dark Surf	ace (F6)				
」 Thick Dark Su	irtace (A12)		Depleted Dark S	urface (F7)			³ Indicators of hydrophytic years	atation and
Sandy Mucky	Mineral (S1)		Redox Depressio	ons (F8)			wetland hydrology must be pres	sent, unless
5 cm Mucky P	eat or Peat (S3)						disturbed or problema	tic.
Restrictive	e Layer (if obs	erved):						
Туре:							Hydric Soil Present?	Ves X No
Depth (inches):							
(etland Hydro	blogy Indicators	S:	check all that apply	A			Secondary Indicators (mir	aimum of two roquiro
		blie is required,		/)	•			
J Surface Water	r (A1)		Water-Staine	d Leaves (B	9)		Surface Soil Crack	(B40)
] High Water Ia	able (A2)		Aquatic Faun	a (B13)				(B10)
Saturation (A3 ☐	3)			Plants (B14))			
J Water Marks (B1)			fide Odor (C	;1) 			(C8)
Sediment Dep	osits (B2)			cospheres al		g Roots (C		on Aenai Imag.(C9)
	(B3)			Reduced Iror	1 (C4) Diama di C		Stunted or Stresse	ed Plants (D1)
	rust (B4)				Plowed S	5011S (C6)		on (D2)
	(B5)			urface (C7)				(D5)
Sparsely Vege	etated Concave Su	rf. (B8)	Other (Explai	n in Remark	s)			
eld Observati	ions:							
O	Present?	Yes N	lo X Depth	(inches):				
Surface water F	esent?	Yes N	lo X Depth	(inches):				
Water Table Pre			lo Depth	(inches):		4	Wetland Hydrology Present?	Yes <u>X</u> No_
Water Table Pre Saturation Prese	ent?						·	
Water Table Pre Saturation Prese	ent? I Data (stream gau	ge, monitoring we	II, aerial photos, previ	ous inspectio	ons), if av	ailable:		
Surface Water F Water Table Pre Saturation Press	ent? I Data (stream gau	ge, monitoring we	II, aerial photos, previ	ous inspectio	ons), if av	vailable:		
Surrace Water F Water Table Pre Saturation Press	ent? I Data (stream gau	ge, monitoring we	II, aerial photos, previ	ous inspectio	ons), if av	ailable:		

WATERS OF THE U.S. DETERMINATION DATA FORM

Project/Site: Gretna Bottoms	Date: 4/28/2015		
Applicant/Owner: Lyman-Richey Corporation	County: Sarpy County		
Investigator: Ben Fisher & Austin Zigler (HDR)	State: NE		
Details of Stream Crossing:	PLSS: S04 & S09, T13N, R10E		
	Report ID: WUS-1		
Is this watercourse named? Yes Vo			
Name(s):			
Are wetlands associated with this crossing?			
Physical Characteristics of the Ordinary High Water Mark			
✓ Defined Bed And Bank ✓ Presence Of Litter/Debris			
✓ Natural Line Impressed On Bank Presence Of Wrack Lines	✓ Scour		
Sediment Sorting Vegetation Matted Down,	Bent, Or Absent		
Changes In Character Of Soil Leaf Litter Disturbed Or W.	ashed Away U Water Staining		
Destruction Of Terrestrial Vegetation Multiple Observed Flow Ev	ents Change In Plant Community		
Remarks: The area characterized by this data form is a mapped waterway associated with wetlands. A defined bed and bank, natural line impressed on bank, destruction of terrestrial vegetation, litter, debris, disturbed vegetation, and scour were observed. The waterway was observed to have a channel width between 10 and 45 feet (the majority of the channel averaged a 15-foot channel) with 4-8 feet high banks possesing a 1:1 slope. The waterway was conveyed through a culvert under Capehart Road and diverted east to intersect the Western Sarpy Ditch south of Capehart Road.			
Hydrologic Data			
Flow regime: Data sources: USGS			
Perennial flow Direct observation	Indiract knowledge		
Intermittent flow			
Enhemeral flow			
Site Sketch/Photo			
Typical Channel X Section			
(facing upstream)			
1:1 sideslope			
	and the second sec		
1:1 sideslope			
	Ban Bon a'		
and the second	A State of the state of the state of the		
	and the second		
/ 4.8 ft high bank			
	APR/28/2015		

WATERS OF THE U.S. DETERMINATION DATA FORM

Project/Site: Gretna Bottoms	Date:	4/29/2015
Applicant/Owner: Lyman-Richey Corporation	County:	Sarpy County
Investigator: Ben Fisher & Austin Zigler (HDR)	State:	NE
Details of Stream Crossing:	PLSS:	S09, S10, S15, T13N, R10E
	Report ID:	WUS-2
Is this watercourse named? Ves No		
Name(s): Western Sarpy Ditch	[
Are wetlands associated with this crossing?		
Physical Characteristics of the Ordinary High Water Mark		
Defined Bed And Bank Presence Of Litter/Debris		Shelving
Image: Natural Line Impressed On Bank Image: Presence Of Wrack Lines Image: Natural Line Impressed On Bank Image: Presence Of Wrack Lines		Scour
Sediment Sorting Vegetation Matted Down,	Bent, Or Absent	Deposition
Changes In Character Of Soil	ashed Away	Water Staining
Destruction Of Terrestrial Vegetation Multiple Observed Flow Ev	ents	Change In Plant Community
Remarks: The area characterized by this data form is a manned wate	rway accoriated w	ith watlands. A defined had and
bank, natural line impressed on bank, destruction of terrest	rial vegetation. litte	er, debris, disturbed vegetation.
and scour were observed. The waterway was observed to	have a channel wi	dth between 2 and 15 feet with 2-4
feet high banks possesing a 1:1 slope. The waterway was	observed on the ea	astern edge of the Study Area
throughout the entire length of the Project.		
Hydrologic Data		
Flow regime: Data sources: USGS		
Perennial flow Direct observation	Indirect knowl	edre
Image: Perennial flow Direct observation Intermittent flow Gaging Station:	Indirect knowl	ledge
Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other:	Indirect knowl	l <u>edge</u> ng: Canal/Ditch
Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other:	Indirect knowl USGS mappir USDA mappir	ledge ng: Canal/Ditch ng:
Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Øther:	Indirect knowl USGS mappir USDA mappir Other:	l <u>edge</u> ng: Canal/Ditch ng:
Image: Second control Direct observation Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other:	Indirect knowl USGS mappir USDA mappir Other:	ledge ng: Canal/Ditch ng:
Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other:	Indirect knowl USGS mappir USDA mappir Other:	l <u>edge</u> ng: Canal/Ditch ng:
Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream)	Indirect knowl USGS mappir USDA mappir Other:	ledge ng: Canal/Ditch ng:
Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream)	Indirect knowl USGS mappir USDA mappir Other:	l <u>edge</u> ng: Canal/Ditch ng:
Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope	Indirect knowl USGS mappir USDA mappir Other:	l <u>edge</u> ng: Canal/Ditch ng:
Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope	Indirect knowl USGS mappir USDA mappir Other:	ledge ng: Canal/Ditch ng:
Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope	Indirect knowl USGS mappir USDA mappir Other:	l <u>edge</u> ng: Canal/Ditch ng:
Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope	Indirect knowl USGS mappir USDA mappir Other:	ledge ng: Canal/Ditch ng:
Perennial flow Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope	Indirect knowl USGS mappir USDA mappir Other:	ledge ng: Canal/Ditch ng:
Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope	Indirect knowl USGS mappir USDA mappir Other:	ledge ng: Canal/Ditch ng:
Perennial flow Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope	Indirect knowl USGS mappir USDA mappir Other:	ledge ng: Canal/Ditch ng:
Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope	Indirect knowl USGS mappir USDA mappir Other:	edge ng: Canal/Ditch ng:
Perennial flow Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope	Indirect knowl USGS mappir USDA mappir Other:	ledge ng: Canal/Ditch ng:
Perennial flow Intermittent flow Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope 2-4 ft, high bank	Indirect knowl USGS mappir USDA mappir Other:	<text></text>
Perennial flow Intermittent flow Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope 2-4 ft. high bank 2-15 ft. wide channel	Indirect knowl USGS mappir USDA mappir Other:	ledge ng Canal/Ditch ng
Perennial flow Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope 1:1 sideslope 2-4 ft. high bank 2-15 ft. wide channel	Indirect knowl USGS mappir USDA mappir Other:	ledge ng Canal/Ditch ng

WATERS OF THE U.S. DETERMINATION DATA FORM

Project/Site: Gretna Bottoms	Date: 4/29/2015
Applicant/Owner: Lyman-Richey Corporation	County: Sarpy County
Investigator: Ben Fisher & Austin Zigler (HDR)	State: NE
Details of Stream Crossing:	PLSS: S10, T13N, R10E
	Report ID: WUS-3
Is this watercourse named?	
Name(s):	
Are wetlands associated with this crossing?	
Physical Characteristics of the Ordinary High water Mark	
Image: Defined Bed And Bank Image: Presence Of Litter/Debris	Shelving
Image: Natural Line Impressed On Bank Presence Of Wrack Lines	Scour
Sediment Sorting Vegetation Matted Down,	Bent, Or Absent Deposition
Changes In Character Of Soil Leaf Litter Disturbed Or W	/ashed Away Water Staining
Destruction Of Terrestrial Vegetation Multiple Observed Flow Ev	vents Change In Plant Community
Remarks: The area characterized by this data form is a mapped wate	erway associated with wetlands. A defined bed and
bank, natural line impressed on bank, destruction of terrest	trial vegetation, disturbed vegetation, and scour were width of 5 feet with 4 feet high banks possesing a 1:1
slope. The waterway was observed on the eastern edge of	the Study Area immediately south of Capehart Road
and extending east.	
Hydrologic Data	
Flow regime: Data sources: USGS	
Flow regime: Data sources: USGS Perennial flow Direct observation	Indirect knowledge
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station:	Indirect knowledge
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Enhemeral flow Other:	Indirect knowledge ✓ USGS mapping: Intermittent
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other:	Indirect knowledge USGS mapping: Intermittent USDA mapping:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other:	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other:	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) Data sources:	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream)	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope	Indirect knowledge ✓ USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope	Indirect knowledge ✓ USGS mapping: Intermittent ─ USDA mapping: Other:
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Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope 1:1 sideslope	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope 1:1 sideslope 4 ft. high bank	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope 1:1 sideslope 4 ft. high bank 5 ft. wide channel	 Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:
Flow regime: Data sources: USGS Perennial flow Direct observation Intermittent flow Gaging Station: Ephemeral flow Other: Site Sketch/Photo Typical Channel X Section (facing upstream) 1:1 sideslope 1:1 sideslope 1:1 sideslope 4 ft. high bank 5 ft. wide channel	Indirect knowledge USGS mapping: Intermittent USDA mapping: Other:

Appendix C

Ground-Level Site Photography





Photo 1: S-01. Upland area adjacent to open water. Orientation northeast.



Photo 2: S-02. Open water pond. Orientation northwest.





Photo 3: S-03. Emergent wetland adjacent to open water. Orientation east.



Photo 4A: S-04A. Upland area located adjacent to open water. Orientation northeast.





Photo 4B: S-04B. Upland area located east of a large wetland complex. Orientation northwest.



Photo 5: S-05. Upland area located adjacent to open water. Orientation southeast.





Photo 6: S-06. Low-lying area containing an enclosed wetland. Orientation north.



Photo 7: S-07. Upland area adjacent to the wetland described by S-06. Orientation east.





Photo 8: S-08. Upland area surrounding an emergent wetland and adjacent to the wetland described in S-06. Orientation north.



Photo 9: S-09. Depression containing an emergent wetland. Orientation west.





Photo 10: S-10. Elevated upland adjacent to the wetland described in S-09. Orientation south.



Photo 11: S-11. Upland area at the edge of an agricultural field. Orientation west.





Photo 12: S-12. Upland area with patch of hydrophytic vegetation. Orientation north.



Photo 13: S-13. Emergent wetland located in a ditch. Orientation east.





Photo 14: S-14. Upland area with hydrophytic vegetation on the edge of an agricultural field. Orientation west.



Photo 15: S-15. Wetland fringe to WUS-1. Orientation south.

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Photo 16: S-16. Upland area adjacent to the wetland described in S-15. Orientation south.



Photo 17: S-17. Upland area on hillslope. Orientation south.





Photo 18. S-18. Emergent wetland fringe leading into WUS-2. Orientation south.



Photo 19: S-19. Upland area adjacent to the wetland characterized in S-18. Orientation south.





Photo 20: S-20. Wetland swale located north of Fairview Road. Orientation north.



Photo 21: S-21. Upland area adjacent to the wetland characterized in S-20. Orientation north.





Photo 22: S-22. Upland area located in grassed waterway adjacent to the wetland characterized in S-23. Orientation north.



Photo 23: S-23. Emergent wetland located in grassed waterway. Orientation north.





Photo 24: S-24. Emergent wetland in waterway. Orientation north.



Photo 25: S-25. Upland to the wetland characterized in S-24. Orientation northwest.





Photo 26: S-26. Wetland located in a drainage-way. Orientation south.



Photo 27: S-27. Upland area adjacent to the wetland characterized in S-26. Orientation northwest.





Photo 28: S-28. Upland area located north of the wetland characterized in S-26. Orientation north.



Photo 29: S-29. Scrub-shrub wetland located in a drainage-way. Orientation northeast.



Photo 30: S-30. Upland area located in a drainage ditch adjacent to the wetland characterized in S-29. Orientation northwest.



Photo 31: S-31. Emergent wetland located in a drainage-way. Orientation west.





Photo 32: S-32. Upland area located outside of an open water area. Orientation east.



Photo 33: S-33. Open-water lake with steeply incised banks. Orientation east.





Photo 34: S-34. Emergent wetland located in a drainage ditch. Orientation east.



Photo 35: S-35. Upland area located west of S-34. Orientation west.





Photo 36: S-36. Wetland located south of Fairview Road. Orientation southwest.



Photo 37: S-37. Upland area located adjacent to the wetland characterized in S-36. Orientation north.





Photo 38: S-38. Emergent wetland located adjacent to forested and scrub-shrub wetlands. Orientation north.



Photo 39: S-39. Scrub-shrub wetland located adjacent to S-38. Orientation north.





Photo 40: S-40. Forested upland located adjacent to S-38. Orientation north.



Photo 41: S-41. Upland area located adjacent to the wetlands characterized in S-39 and S-40. Orientation south.





Photo 42: S-42. Upland area sloped away from emergent wetland. Orientation south.



Photo 43: S-43. Upland area that is sloped away from a drainage bank. Orientation north.





Photo 44: S-44. Upland area located adjacent to S-45. Orientation northwest.



Photo 45: S-45. Scrub-shrub wetland located in a low area. Orientation northwest.







Photo 46: S-46. Upland area located adjacent to scrub-shrub wetland. Orientation west.



Photo 47: S-47. Emergent wetland located north of S-45. Orientation southwest.





Photo 48: S-48. Upland area located adjacent to forested wetland. Orientation north.



Photo 49: S-49. Forested wetland in a low-lying area. Orientation north.





Photo 50: S-50. Scrub-shrub wetland. Orientation southeast.



Photo 51: S-51. Emergent wetland located in a depression. Orientation northeast.





Photo 52: S-52. Upland area located adjacent to the wetland characterized in S-51. Orientation south.



Photo 53: Ag-01. Upland agricultural field. Orientation west.

Gretna Bottoms Wetland Delineation Report



Wetland Delineation Report – Appendix C



Photo 54: Ag-02. Upland area in an agricultural field. Orientation north.



Photo 55: Ag-03. Upland area in an agricultural field that is slightly elevated from the surround area. Orientation south.





Photo 56: Ag-04. Low wetland area in an agricultural field. Orientation east.



Photo 57: Ag-05. Slight upland depression in an agricultural field. Orientation northeast.



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Photo 58: Ag-06. Wetland area in an agricultural field. Orientation northeast.



Photo 59: Ag-07. Low-lying upland area in an agricultural field. Orientation southeast.





Photo 60: Ag-08. Low-lying wetland area in an agricultural field. Orientation west.



Photo 61: Ag-09. Upland agricultural area located in a field. Orientation north.



Wetland Delineation Report – Appendix C



Photo 62: Ag-10. Upland area in an agricultural field. Orientation northeast.



Photo 63: Ag-11. Upland agricultural area. Orientation west.





Photo 64: Ag-12. Upland area located on the edge of an agricultural field. Orientation west.



Photo 65: Ag-13. Upland area at the edge of an agricultural field. Orientation east.





Photo 66: Ag-14. Upland area in an agricultural field. Orientation east.



Photo 67: Ag-15. Slightly depressed wetland area in an agricultural field. Orientation southeast.





Photo 68: Ag-16. Wetland area in an agricultural field. Orientation northwest.



Photo 69: Ag-17. Wetland area in an agricultural field. Orientation northwest.





Photo 70: Ag-18. Wetland area in an agricultural field. Orientation southeast.



Photo 71: Ag-19. Slightly depressed wetland area in an agricultural field. Orientation south.





Photo 72: Ag-20. Wetland area in an agricultural field. Orientation northwest.



Photo 73: Ag-21. Wetland depression located in an agricultural field. Orientation south.





Photo 74: Ag-22. Wetland depression located in an agricultural field. Orientation west.



Photo 75: Ag-23. Depressed wetland area in an agricultural field. Orientation southwest.





Photo 76: Ag-24. Wetland area in an agricultural field that leads down to a waterway. Orientation north.



Appendix D

Groundwater Analysis Technical Memorandum

Technical Memorandum

То:	Lyman-Richey Corporation
From:	HDR
Date:	August 30, 2021
Subject:	Groundwater Analysis – Gretna Bottom 2 Wetland Bank

1.0 Introduction

Lyman-Richey Corporation (LRC) has contracted HDR Engineering, Inc. (HDR) to develop a Site Development Plan for the Gretna Bottom 2 Wetland Mitigation Bank (Gretna Bottom 2, or the Project). The Project area consists of the unmined western portion of the Phase 1 mining area and portions of the existing mine areas. The Project is intended to mitigate wetland impacts associated with future, undefined sand and gravel operations and may allow commercial sale of wetland mitigation credits to outside entities.

This Technical Memorandum (TM) describes groundwater analysis performed for the Project. Groundwater levels (elevations), depth to groundwater below land surface, and surface and nearsurface soil texture data are presented, based on available data. Groundwater elevations (water table) and depth to groundwater surfaces are interpolated and mapped as part of this analysis for use in development of the Project's grading plan, which is expected to be hydrologically driven by groundwater.

2.0 Analysis Methods

The groundwater analysis was performed using available groundwater-level information measured near the Project, including: 1) recent sub-daily measurements from three monitoring wells (one of which was replaced due to flooding), and 2) historic static groundwater-level depth measurements from well registration records. High-resolution topographic data was also used in the analysis.

Sub-daily (8-hour) groundwater-level elevation (GWL) records (aggregated from hourly measurements) were obtained for eight wells from personnel at the Lower Platte South NRD, along with well coordinates. The Lower Platte South NRD staff corrected the GWLs for barometric pressure changes from measurements at a nearby station established by the NRD staff. The wells with the GWL data from the Lower Platte South NRD staff are referred to herein as Eastern Nebraska Water Resources Assessment (ENWRA) Project wells. The GWLs were collected between 8/27/2008 and 11/13/2020 via pressure transducer and electronic data logger at multiple depths. Only the records from the shallowest measurement depths were evaluated for the current study presented in this TM. Three ENWRA Project monitoring wells were selected for analysis of GWLs based on proximity to the Project. One of these wells was replaced after being completely lost in the spring flooding of 2019. The wells assessed (including the replacement well) are named "Ash-01_15", "Ash-01_17R", and "Ash-05_15". The replacement well, Ash-01_17R, is located about 2,300 feet southwest of Ash-01_15. Summary statistics of GWLs were calculated for each well, including all available records.

A gap in record for Ash-01_15 occurs after 11/1/2018 until the end of record on 11/13/2020 (2.03 years). The record of well Ash-01-17R begins on 5/22/2020, 1.56 years after the last available record from Ash-01_15. Two gaps in record exist for well Ash-05_15, extending from 9/23/2011 to 11/11/2016, and from 11/6/2020 to 11/13/2020 (5.16 years in total). Some other minor gaps exist in GWL records, mostly for a day, but up to a week, in duration. Time series of the GWLs from these well records are plotted on **Figure 1**.

Measurements of historic static (non-pumping) depth to water table, including recorded lithology on geologic logs, generated during drilling and construction of registered wells nearest the Project, obtained from the Nebraska Department of Natural Resource (NDNR) Interactive Registered Groundwater Wells Map (<u>https://dnr.nebraska.gov/data/groundwater-data</u>), were reviewed. Depth to groundwater from the NDNR logs was converted to GWLs by subtracting static depth to water table from the most recently available Light Detection And Ranging (LiDAR)-derived land surface elevations. Gridded 0.7-meter (2.5-foot) resolution LiDAR land surface elevations over the Project are from the 3D Elevation Program (3DEP 2016). The 3DEP 2016 LiDAR elevations were compared to a 2015 topographic survey of the Project supplied by LRC and differences in elevation are negligible (within 1 foot and most are equal to 0 feet). Additionally, the Project topography has changed little according to LRC since the 2015 topographic survey, despite the 2019 flooding.

Average GWLs from the three ENWRA Project wells, and the GWLs based on the NDNR logs were converted to a 10-foot gridded continuous (raster) surface and 0.5-foot contour lines across the Project using Inverse 'Natural Neighbor' interpolation and 'Contour' geoprocessing tools built-into the ArcGIS environment. A publically-available statewide water-table contour map, with a 10-foot contour interval representing spring 1995 conditions, obtained as a shapefile from University of Nebraska-Lincoln Conservation and Survey Division staff, was used as a basis for comparison and corroboration of GWLs and general groundwater flow direction. Another basis of comparison was made between the GWLs from two data points analyzed anew in this study that are the same data points (geographically) from the Phase 1 Gretna Bottoms project, including the Ash-01_15 ENWRA Project well, and the registered well G-158991. Differences are attributed to the use of a different period of record to generate an average GWL, and to a different source/timeframe of topographic data used to derive GWLs, respectively.

The raster surface of GWLs was then used to determine and map a continuous raster surface of the depth to the water table, calculated by subtracting the mapped GWLs from the gridded LiDAR elevations. Values of depth to water table that were negative were converted to values of zero. No other sources of data were used to estimate and map the water table or depth to groundwater. Elevations are in feet relative to the North American Vertical Datum of 1988 (NAVD 88). Spatial data is projected in Nebraska state plane (North American Datum of 1983 [NAD83]) with units of feet.

3.0 Results

Summary statistics of GWLs from the ENWRA Project wells, calculated using all available records (covering 8/27/2008–11/13/2020), are listed in **Table 1**. Average GWLs differ by up to 9.9 feet, but the distance between these well is as much as 7,300 feet (Ash-01_15 to Ash_05_15). Individually, the records indicate GWLs vary by between 4.0 and 9.3 feet, with absolute GWLs varying from 1,057.2 feet (Ash-05_15) up to 1,077.0 feet (Ash-01_15). Time series of the GWLs (hydrographs) from the ENWRA Project well records are plotted on **Figure 1**.

Based on the well registration records, the static depth to water table near the Project ranges from 1.5 to 12 feet (**Table 2**). The geologic logs on these well registration records indicate that clay, silty clay, sandy clay, sand, and gravel exists from land surface down to over 50 feet. The lithology and the static GWLs recorded on the well registration records indicates that the water table can be found within the tighter materials, including clay, silty clay, and sandy clay, as well as higher permeability materials, including sand and gravel (see **Table 2**). This heterogeneity in near-surface soil types is consistent with the floodplain environment of the Platte River and Elkhorn River valleys and floodplain.

The estimated 0.5-foot contours of the water table based on the ENWRA Project well GWL averages and GWLs from registered well records (single measurements), are overlaid with the gridded LiDAR land surface topography on **Figure 2**. The land surface slopes from northwest to southeast across the Project, with the lowest elevations occurring in the east-central and southern parts. The mean land surface elevation is 1,072.4 feet, ranging from 1,067.1 to 1,075.4 feet. A slight ridge trends through the Project in a thin strip from the northwest corner to the east-central edge of the Project. The mapped water table generally mimics the land surface topography, sloping northwest to southeast, including a ridge of higher elevation trending from the northwest corner to the east-central part of the Project. The mean GWL equals 1,069.7 feet, ranging from 1,066.1 to 1,070.4 feet. The lowest GWLs occur in the southern part of the Project.

Depth to the water table is overlaid with the estimated 0.5-foot contours of the water table on **Figure 3** (note that the scale of **Figure 3** is larger, relative to that of **Figure 2**, allowing for easier viewing of details at the Project site). The mean depth to the water table equals 2.7 feet below land surface (0.75-foot standard deviation). The depth to water table across the Project ranges from approximately 0 to 6.6 feet, with both extremes occurring near a north-south oriented linear feature (possibly a trench) that occurs in the southern part of the Project. The central and east-central parts of the Project have the smallest depth to water table, while the southern, northwestern, and northeastern corners of the Project have the largest depths to water table.

The publically-available statewide water-table contours are also illustrated on **Figures 2** and **3**, and these indicate that the broad (or regional) groundwater flow direction and hydraulic gradients are similar to those depicted by the water-table contours generated from the analysis of this study. Since these statewide 10-foot contours do not provide specific, fine-resolution, details at the Project, they tend to indicate a smooth gradient and do not illustrate the same variations in hydraulic gradients as mapped in this study at and in the vicinity of the Project. Namely, the hydraulic gradients as mapped in this study are low (shallow) across much of the Project but increase at the southern part of the Project, and to a lesser extent on the eastern part of the Project (GWLs decline abruptly to the south, southeast, and east).

Two data points analyzed anew in this study are the same data points (geographically) as used in the Phase 1 Gretna Bottoms project, including the Ash-01_15 ENWRA Project well, and the registered well G-158991. At these two measurement points, the differences between the Phase 1 and Phase 2 groundwater analyses are considered negligible, at no more than 0.3 feet. The GWL calculated for the new (Phase 2) analysis at Ash-01_15 is 0.2 feet lower, and the GWL calculated at G-158991 is 0.3 feet lower, than the GWLs from the Phase 1 study. The differences noted here are small, thus they are of no consequence.

4.0 Limitations

The findings in this technical memorandum are intended to allow analysis of groundwater levels (GWLs) across the Project relying on readily available public information/data. As with any scientific investigation, the findings depend on the available data and on information provided and published from other sources. While HDR has used its best efforts in preparing this technical memorandum, HDR has assumed that third party or client data is accurate, complete, reliable, and current. The analysis presented herein does not constitute a detailed evaluation of actual site conditions since no measurements were obtained within the Project. The results presented in this report are interpretations and must be used with caution. Use of this work product by others is at their own risk and the user assumes liability for further use.

The existing gravel-mining ponds near the Project, as depicted on project satellite imagery (background map layers), were not accounted for-their presence should have an effect on the GWLs at the Project by having a flat gradient (single water level) across their entire surface. In addition, potential for inaccuracies in mapped GWLs arise from the limited spatial density of the observation points. In some areas, these discrepancies are expected to have the potential to be larger than in other areas, the magnitude of which can be approximated by comparison between the different information available on the depth to groundwater (and GWLs) and is expected to be larger as the distance between points of interest and points with available measurement information increases. Partly, the magnitude of uncertainty can be related to the type of measurement data, including whether a measurement was made from a monitoring well screened in the shallow aguifer with measurements from pressure transducer, or from a registered well (irrigation, commercial, or industrial) screened in deeper intervals and having longer screens as compared to the monitoring wells with measurements made using a sounding device usually shortly after drilling (same day to a few weeks in most cases). Therefore, there is potential that the deeper well measurements have a lower level or precision and accuracy when it comes to representing the water table than monitoring well measurements obtained from shallow intervals. Furthermore, it is important to note that average GWLs were used from the monitoring wells, while GWL measurements were only available for one time period from well registration records, as inputs used to generate the mapped GWLs.

5.0 References

- HDR Engineering, Inc. (HDR), 2018. Gretna Bottoms 404 Permitting Revised Groundwater Analysis Report. Technical Memorandum Prepared for Lyman-Richey Corporation. July.
- HDR Engineering, Inc. (HDR), 2021. 2020 Wetland Mitigation Monitoring Report. Gretna Bottom Wetland Mitigation Bank, USACE File No. 2017-01848. Sarpy County, Nebraska. Prepared for Lyman-Richey Corporation. March.
- 3DEP (3D Elevation Program). 2016. LiDAR Data is QL2 (0.7-Meter). U.S. Geological Survey, Papio-Missouri River NRD, Douglas, Lancaster, and Sarpy Counties, and the Cities of Omaha, Lincoln, Fremont, and Blair. Collection of LiDAR Data Took Place from December 8, 2016 through February 3, 2017.


FIGURE 1. Time Series of Groundwater Elevation Records (Hydrographs) from ENWRA Project Wells (Note: Elevations are in feet above the North American Vertical Datum of 1988)

Groundwater Elevation	Monitoring Well				
Statistic	Ash-01_15	Ash-01_17R	Ash-05_15		
Minimum	1067.7	1065.8	1057.2		
Average	1071.3	1067.1	1061.4		
Maximum	1077.0	1069.8	1065.3		
Range	9.3	4.0	8.1		
Standard Deviation	1.1	0.9	1.3		
Number of Measurements	8,998	527	5,583		
Measurement Date Range	8/27/2008 – 11/1/2018	5/22/2020 – 11/13/2020	8/27/2008 – 11/5/2020		
Length of Measurement Record (days)	3,718	175	4,453		
Length of Measurement Record (years)	10.18	0.48	12.19		

TABLE 1. Groundwater Elevation Summary Statistics for ENWRA Project Wells

Notes:

1. Groundwater elevations are in feet relative to the North American Vertical Datum of 1988.

2. Length of measurement records do not include data gaps.

3. Ash-01_17R is a replacement well located 2,800 feet southwest of Ash-01_15.

Well Registration Number	Static Groundwater- Level Depth (feet)	Date of Measurement (feet)	Total Depth of Well (feet)	Lithology ¹ (Depths in feet)
G-060900	4	12/22/1978	60	Topsoil (0–3); Fine Sand (3–10); Medium Sand (10–17)
G-082391	4	4/7/1994	52	Topsoil/Sand (0–4); Clay (4–13); Coarse Sand (13–38)
G-088058	1.5	4/10/1996	116	Silty Clay (4–9); Sand and Gravel (9–50)
G-088059	4	4/11/1996	86	Silty Clay (4–11); Sand and Gravel (11–41)
G-109425	3	3/28/2000	50	Sand (0–3); Silty Clay (3–10); Sand and Gravel (10–51)
G-157943	3	9/9/2010	60	Topsoil (0–5); Clay (5–8); Fine Sand (8–12); Sand with Gravel (12–17)
G-158991	8	5/4/2011	73	Sandy Clay (0–6); Sand with Gravel (6–59)
G-177591	8	8/3/2015	52	Clay (0–2); Fine Sand (2–20)
G-180920	12	9/14/2016	51	Clay (0–2); Fine Sand (2–20)
G-180921	12	9/16/2016	71	Clay (0–8); Fine Sand (8–28)
G-184658	7	4/16/2018	45	MedCoar. Sand (0–4); Clay (4–12); Sandy Clay (12–45)

TABLE 2. Registered Well Static Groundwater-Level Depths and Lithology

Notes:

1. Lithology from well registration record geologic (driller's) logs showing intervals with top depths no deeper than 15 feet.



FIGURE 2. Mapped Water Table Contours and LiDAR Land Surface Topography (Note: Elevations are in feet above the North American Vertical Datum of 1988)



FIGURE 3. Mapped Depth to Water Table and Water Table Contours (Note: Elevations are in feet above the North American Vertical Datum of 1988)



Appendix E Design Drawing



KEY	QTY	ACREAGE	PRODUCT NAME	MANUF.	NOTES
$\left[\right]$	1,654,000 SF	39.1	UNITED OBL WETLAND MIXTURE	UNITED SEEDS, INC.	PEMA/C WETLANDS, DRILL SEEDED; 12 LBS / ACRE
	226,500 SF	5.2	UNITED FACW WETLAND MIXTURE	UNITED SEEDS, INC.	PSSA WETLANDS, DRILL SEEDED; 18 LBS / ACRE
	81,000 SF	1.9	UNITED FACW WETLAND MIXTURE	UNITED SEEDS, INC.	PFOA WETLANDS, DRILL SEEDED; 18 LBS / ACRE
	278,500 SF	6.4	NATIVE PRAIRIE GRASS MIXTURE	UNITED SEEDS, INC.	BUFFER, DRILL SEEDED; 25 LBS / ACRE

WETLAND

	MITIGATION SUMMARY					
LEGEND	WETLAND TYPE	MITIGATION SUBCLASS	ACREAGE			
MAJOR CONTOUR (5')	PEMA/C	RIVERINE FLOODPLAIN	39.1			
MINOR CONTOUR (1')	PFOA	RIVERINE FLOODPLAIN	1.9			
MINOR CONTOUR (0.5')	PSSA	RIVERINE FLOODPLAIN	5.2			

_///.	AMORPHA FRUTICOSA	FALSE INDIGO
<i>())</i>	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH

W.	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	162
///	CORNUS RACEMOSA	GREY DOGWOOD	162
$\parallel \parallel$	SAMBUCUS CANADENSIS	BLACK ELDERBERRY	162

162

HR

TREE PLANTINGS (PFOA) -

1.9	1.9 ACRES @ APPRX. 80 TREES/ACRE DENSITY						
KEY	BOTANICAL NAME	COMMON NAME	QUANTITY				
Ø	CAESALPINIACEAE GYMNOCLADUS	KENTUCKY COFFEETREE	29				
0	PLATINUS OCCIDENTALIS	AMERICAN SYCAMORE	29				
\odot	ULMUS AMERICANA	AMERICAN ELM	21				
\otimes	QUERCUS BICOLOR	SWAMP WHITE OAK	16				

AERIAL IMAGERY: 2020 USDA NAIP

E: 2,658,500

PROJECT TITLE: LYMAN-RICHEY CORPORATION, GRETNA BOTTOM PHASE 2

SHEET TITLE: WETLAND MITIGATION CONCEPT



DATE: 02/04/2022

0 100 200 Feet

EXHIBIT NUMBER: 1



Appendix F Seed Mixtures





United OBL Wetland Mixture is formulated to accurately represent species found in Zone 3 (lowa) and Zone 5 (Nebraska) as designated by the <u>USDA Wetland Indicator Status</u>. OBL wetland species are found in standing water areas and **United OBL Wetland Mixture** is a complete mixture using Sedges, Rushes and Wildflowers. Special emphasis of species selection was placed on seed count per pound to minimize domination of smaller sized seeds.





Seeding Rates: 12 LBS / ACRE (drill seeded) 15 LBS/ ACRE (broadcast or dormant seed) Seeding Dates: March-July Mid November-March (dormant seeded)

Germination Times: 10-30 Days as a Mixture







Botanical Name	Common Name	% of Mix	PLS Rate (12LBS/AC)	Flower Color	Mature Height
Alisma subcordatum	Mud Plantain	.42%	.0504	White	1'
Asclepias incarnata	Swamp Milkweed	8.33%	.9996	Pink	3-5'
Aster puniceus	Purple Aster	.25%	.03	Violet	5-6'
Bidens cernua	Bur Marigold	2.08%	.2496	Yellow	3'
Calamagrostis canadensis	Blue Jointgrass	.21%	.0252		5'
Carex cosmos	Bristly Sedge	.63%	.0756		8-24'
Carex bebbi	Bebb's Sedge	6.25%	.75		2'
Carex Iurida	Lurid Sedge	2.08%	.2496		3'
Carex nebraskensis	Nebraska Sedge	14.58%	1.7496		3'
Carex stinata	Awl Sedge	4.17%	.5004		1.5-3'
Carex stricta	Tussock Sedge	.08%	.0096		3'
Carex vulpinoidea	Fox Sedge	19.17%	2.3004		3'
Chelone glabra	Turtlehead	.08%	.0096	Cream	5'
Echinochloa muricate	Barnyard Grass	14.58%	1.7496		2'
Cleocharis palustris	Spike Rush	6.67%	.8004		1.5'
Eupatorium fistulosum	Joe Pye Weed	2.08%	.2496	Pink	5'
Glyceria striata	Fowl Mannagrass	.58%	.0696		4'
Juncus effuses	Soft Rush	.58%	.0696		4'
Leersia oryzoides	Rice Cutgrass	1.67%	.2004		3'
Lobelia cardinalis	Cardinal Flower	.17%	.0204	Red	3-4'
Ludwigia alternifolia	Seedbox	.08%	.0096	Yellow	3'
Mimulus ringens	Monkey Flower	.42%	.0504	Purple	2'
Scirpus atrovirens	Green Bulrush	6.25%	.75		5'
Scirpus Validus	Soft Stem Bulrush	8.33%	.9996		5-6'
Solidago riddellii	Riddell's Goldenrod	.25%	.03	Yellow	3'

ED

United FACW Wetland Mixture is formulated to more accurately represent species found in Zone 3 (Iowa) and Zone 5 (Nebraska) as designated by the USDA Wetland Indicator Status. FACW wetland species are found in wet soils that will occasionally dry out during summer months. United FACW Wetland Mixture is a complete mixture of native warm season grasses, native cool season grasses, wildflowers and sedges. Special emphasis of specie selection was placed on seed count per pound to minimize domination of smaller sized seeds. Dormant seeding is recommended for natural seed stratification.

SEEDING RATES: 15 LBS/Acre (drill seeded) 18 LBS/ Acre (broadcast or dormant seeded) **SEEDING DATES:** March-July Mid November-February (dormant seeding) **GERMINATION TIMES:** 10-30 Days as a mixture

Mixturg

United

F-ACW Wetland

CONTRACTOR: NE HYDRO SEEDING PROJECT: GRETNA BOTTOM WETLANDS SEEDING RATE: 18 BULK LBS / AC (8)-49.05 LB BAGS = 2.725 ACRES











			1	1	1
Botanical Name Common Name		% of Mix	PLS Rate (12LBS/AC)	Flower Color	Mature Height
Agrostis gigantean	Red Top	1.67%	.25		2-3'
Andropogon gerardii	Big Bluestem	6.67%	1		5-7'
Aster Novae-angliea	New England Aster	1.67%	.25	Purple	2-6'
Aster umbellatus	White Aster	.13%	.02	White	2-6'
Bindens frondosa	Beggar Ticks	1.67%	.25	Yellow	4'
Carex crinite	Fringed Sedge	.47%	.07		3'
Carex lupulina	Hop Sedge	1.67%	.25		3'
Carex scoparia	Blunt Broom Sedge	1.33%	.2		2'
Elymus canadensis	Canada Wildrye	16.67%	2.5		3-4'
Elymus virginicus	Virginia Wildrye	18.33%	2.75		3-4'
Eupatorium perfolitum	Boneset	.33%	.05	White	5'
Euthamia graminifolia	Grass Leaved Goldenrod	.33%	.05	Yellow 2-3	
Festuca rubra	Chewings Fescue	11.67%	1.75		2-3'
Glyceria grandis	eria grandis American Mannagrass .33% .05		.05		5-6'
Helenium autumnale	Common Sneezeweed	.33%	.05	Yellow	4-5'
Heleopsis helianthoides	Oxeye Sunflower	2.67%	.4	Yellow 4'	
Helianthus grosseserratus	Sawtooth Sunflower	.20%	.03	Yellow	5-7'
Juncus tenuis	Path Rush	.13%	.02		1'
Lobelia siphillitica	Great Blue Lobelia	.13%	.02	Blue	1'
Panicum virgatum	Switchgrass	6.67%	1		5-6'
Phleum pretense	Timothy	5.00%	.75		1-3'
Physostegia virginiana	Obedient Plant	.13%	.02	Purple	1-4'
Poa palustris	Fowl Bluegrass	11.67%	1.75		2-3'
Polygonum pensylvanicum	Pennsylvania Smartweed	1.00%	.15	Pink/Purple	4-5'
Rudbeckia laciniate	Cutleaf Coneflower	.13%	.02	Yellow	5'
Siliphium perfoliatum	Cup Plant	1.33%	.2	Yellow 7-8'	
Spartina pectinata	Prairie Cordgrass	3.33%	.5	6'	
Verbena hastata	Blue Vervain	1.33%	.2	Violet	2-4'
Vernonia gigantea	Giant Ironweed	1.33%	.2	Purple	3-6'
Zizea aruea	Golden Alexanders	1.67%	.25	Yellow	3'

KIND*	VARIETY	PLS#/AC	AC (X)	(=) TOTAL PLS #	PLS FACTOR	TOTAL BULK LBS
COMMON YARROW		0.046875	1.0	0.047	1.045	0.05
ANISE HYSSOP		0.03125	1.0	0.031	1.012	0.03
LEAD PLANT	· · · · · · · · · · · · · · · · · · ·	0.125	1.0	0.125	1.111	0.14
COMMON MILKWEED		0.125	1.0	0.125	1.021	0.13
PARTRIDGE PEA		0.5	1.0	0.500	1.152	0.58
PRAIRIE COREOPSIS	11	0.125	1.0	0.125	3.027	0.38
WHITE PRAIRIE CLOVER		0.15625	1.0	0.156	1.027	0.16
PURPLE PRAIRIE CLOVER		0.125	1.0	0.125	1.022	0.13
PURPLE CONEFLOWER		0.5	1.0	0.500	1.034	0.52
FALSE OX-EYE SUNFLOWER		0.25	1.0	0.250	1.012	0.25
PRAIRIE BLAZINGSTAR		0.09375	1.0	0.094	1.271	0.12
WILD BERGAMONT		0.03125	1.0	0.031	1.207	0.04
DOTTED MINT		0.0625	1.0	0.063	1.494	0.09
GREYHEADED CONEFLOWER		0.375	1.0	0.375	1.021	0.38
PRAIRIE WILD ROSE		0.125	1.0	0.125	1.236	0.15
BLACK EYED SUSAN		0.125	1.0	0.125	1.030	0.13
SHOWY GOLDENROD		0.03125	1.0	0.031	1.471	0.05
OHIO SPIDERWORT		0.25	1.0	0.250	1.042	0.26
HOARY VERVAIN		0.09375	1.0	0.094	1.083	0.10
GOLDEN ALEXANDERS		0.0625	1.0	0.063	1.031	0.06
SIDEOATS GRAMA		2.5	1.0	2.500	1.271	3.18
BLUE GRAMA		0.25	1.0	0.250	1.160	0.29
CANADA WILDRYE		- 1	1.0	1.000	1.120	1.12
PATH RUSH		0.015625	1.0	0.016	1.242	0.02
PRAIRIE JUNEGRASS		0.25	1.0	0.250	1.410	0.35
LITTLE BLUESTEM		1	1.0	1.000	1.267	1.27
INDIANGRASS		0.25	1.0	0.250	1.024	0.26
PRAIRIE DROPSEED		0.5	1.0	0.500	1.053	0.53
Approved by:		ACRES / BAG:	1.000		TOTAL BULK LBS	10.76
Dan Strey		LBS / BAG:	10.76	1.00	# of Bags	1
		NEED:	1	1.00	AC. TAGS	1

United Seeds Inc. Upland Meadow / Buffer Mix