

September 14, 2018

Rock Island Corps of Engineers 1 Clock Tower Building 1500 Rock Island Drive Rock Island, IL 61201

RE: IEDA Certified Site Program Jurisdictional Determination Princeton, Iowa Shive-Hattery PN: 3174430

To Whom It May Concern:

Enclosed, please find the request for an Approved Jurisdictional Determination, wetland delineation report, and associated maps for the Anderson 400 property in Princeton, Iowa. The Anderson family is in the process of obtaining IEDA Green Certification Program site certification from the Iowa Economic Development Authority (IEDA) for their 400-acre property. The certification they are working to obtain is for a Green Business Park. Per the IEDA's certification requirements, the Andersons are required to obtain an Approved Jurisdictional Determination letter from the U.S. Army Corps of Engineers for wetlands and other Waters of the United States.

As indicated above, the intent of this development is to be a Green Business Park. Therefore, the wetlands delineated in this report will be required to be designated as "undevelopable" and will be preserved within the Master Development Plan and integrated into the property's permanent open space areas for preservation. A city ordinance and property covenants are in the process of being adopted by the City of Princeton to ensure that this occurs as the property develops. Future developers of this property will be required to provide a minimum of a 100-foot buffer surrounding the wetlands within the 400-acre business park.

We would be happy to meet with you to discuss this program and answer any questions you may have for this development. Please contact Jake Wilson at (515) 645-9729 or by email at jwilson@shive-hattery.com with any questions and/or to schedule a meeting to discuss this project.

Sincerely, SHIVE-HATTERY, INC.

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Jake Wilson Environmental Scientist

Enclosures: Wetland Delineation

JOINT APPLICATION FORM FOR IOWA					
1. Application Number 2. Date Received					
1. Application Number 2. Date Received					
3. and 4. (SEE SPECIAL INSTRUCTIONS	NAME, MAILING ADDRESS AND TELE	PHONE NUMBERS			
3a. Applicant's Name	3b. Co-Applicant/Property Owner	4. Authorized Agent (an agent is not			
Marijo Anderson Company Name (if any)	Name (if needed or if different from	required)			
Company Name (ir any)	applicant)	Jake Wilson Company Name (if any)			
Address	Company Name (if any)	Shive-Hattery			
2745 Hidden Valley Trail NE		Address			
City, State, Zip Solon, Iowa 52333	Address	4125 Westown Parkway, Suite 100			
Email Address	City, State, Zip	City, State, Zip West Des Moines, Iowa 50266			
mj.anderson50911@outlook.com		Email Address			
	Email Address	jwilson@shive-hattery.com			
Applicant's Phone Nos, w/area code	Applicantic Direct Attack of the				
Business:	Applicant's Phone Nos. w/area code Business:	Agent's Phone Nos. w/area code Business: (515) 645-9729			
Residence: (563) 320-5252	Residence	Residence:			
Cell:	Cell:	Cell;			
Fax:	Fax:	Fax: (515) 288-0053			
· · · · · · · · · · · · · · · · · · ·	STATEMENT OF AUTHORIZATION				
I hereby authorize, Jake Wilson	to act in my behalf as	s my agent in the processing of this			
application and to furnish, upon request, su	pplemental information in support of this	permit application.			
Marito Unde	<u>1300</u> 9-14-18				
Applicant's Signatur	e	Date			
5. ADJOINING PROPERTY OWNERS (Up	stream and Downstream of the water bod	V) 2			
Name Mailing Ac		Phone No. w/area code			
1.					
2.					
3.					
6. PROJECT TITLE:					
Anderson 400, Princeton Development					
7. PROJECT DESCRIPTION (Include all fe	atures). This project is an anticipated area	an business park that is seating Green			
Business Park (GBP) development certifica	tion from the Iowa Economic Development	Authority (IEDA). The site is located on the			
western boundary of Princeton, Iowa. The v	vetlands delineated in the delineation repo	ort will be required to be designated as			
"undevelopable" and will be preserved withi	n the Master Development Plan and inter	rated into the property's permanent open			
space areas for preservation. A city ordinant Princeton to ensure that this occurs as the p	ice and property covenants are in the property developer. Future developer of it	cess of being adopted by the City of			
minimum of a 100-foot buffer surrounding th	the wetlands within the 400-acre husiness	his property will be required to provide a park. We request an Approved Jurisdictional			
minimum of a 100-foot buffer surrounding the wetlands within the 400-acre business park. We request an Approved Jurisdictional Determination for this project area.					
8. PURPOSE AND NEED OF PROJECT: The purpose of this project is to develop current agricultural land into a green business					
park in an area suitable for such a project.					
The need for this project is that the surrounding area doesn't offer a nature-focused location for development of business.					
Submission of the appropriate form(s) is rec	uired by the lowa Department of Natural	Resources Flood Plain Management			
Program (also known in this form as the Flo	od Plain Permits Section). The forms for v	various project types can be obtained online			
within http://floodplain.iowadnr.gov/ or by calling 866/849-0321.					

COMPLETE THE FOLLOWING FOUR BLOCKS IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED							
9. REASON(S) FOR DISCHARGE:							
10. TYPE(S) OF MATERIAL BE TYPE:	EING DISCHARG	ED AND THE A	MOUNT O	F EACH TYPE	IN CUBIC YA	ARDS:	
AMOUNT IN CUBIC YARDS:							
11. SURFACE AREA IN ACRES Instructions)	S OF WETLANDS	S OR OTHER W	ATERS FI	LLED, AND ST	REAM LENG	TH IF APPLICAE	BLE (See
12. DESCRIPTION OF AVOIDA							
Future developers of this proper WUS within the 400-acre busine	rty will be required ess park.	d to provide a m	inimum of a	a 100-foot buffe	er surrounding	g the wetlands an	d other
13. PROJECT LOCATION							
LATITUDE: 41.662708			GIS Coo Northing:	rdinates in NA	D 1983 UTM	Zone 15	
LONGITUDE: -90.354662			Easting:				
STREET, ROAD, OR OTHER D	DESCRIPTIVE LC	CATION	LEGAL DESCR	QUARTER	SECTION	TOWNSHIP NO.	RANGE
Bud Creek joins Mississippi			DESCR	WATERV		79N	5E
	OWN (check app	ropriate box)		WATERV	VAY		R MILE licable)
Municipality Name Princeton, lo COUNTY		710 0005					
	STATE	ZIP CODE					
Scott	lowa	52768	Bud Cree	k			
14. Date activity is proposed to	commence ?		Date acti	vity is expected	to be comple	eted ?	
15. Is any portion of the activity NOTE: If answer is "YES" give r					🛛 No		
Month and Year the activity was	completed _				Indicate the	existing work on o	drawings.
16. List all approvals or certifica	tion and denials r	eceived from oth	ner Federa	, interstate, sta	te, or local ag	gencies for struct	ures,
construction, discharges or othe Issuing Agency	er activities descril	bed in this applie Identification		Date of	Date of A	nnroval D	ate of
	<u>ypo or rippiotai</u>	. <u>No.</u>		pplication	Date of A		<u>Denial</u>
	a						
17. CONSENT TO ENTER PROPERTY LISTED IN PART 13 ABOVE IS HEREBY GRANTED.       Image: Second Se							
Application is hereby made for the activities described herein. I certify that I am familiar with the information contained in the							
application, and that to the best of my knowledge and belief, such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.							
Jak Wh 9/14/2018							
Signature of Applicant or Authorized Agent Date							
Signature of Applicant or Authorized Agent Date							
Signature of Applica	Int or Authorized A	Agent	· · · ·		Date		
Corps of Engineers	Iowa DNR Attn: Flood Plain F					pplicant's Copy	
		enni Section	Aut. 30Ve	reign Lands Seo	20011		

Anderson Princeton Development - Wetland Delineation Report

Prepared For:

# The Anderson 400 Property Paul and Marijo Anderson

Project No. 3174430



1701 River Drive | Suite 200 | Moline, IL 61265 309.764.7650 | 309.764.8616 | shive-hattery.com

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### Introduction

Shive-Hattery was contracted by the property owners of the Anderson 400 property to complete a wetland delineation within the complete boundaries of the proposed "Anderson 400". This project is an anticipated green business park that is seeking Green Business Park (GBP) development certification from the Iowa Economic Development Authority (IEDA). The site is located on the western boundary of Princeton, Iowa (Figure 1, Project Area Location). The wetland delineation was performed on July 24<sup>th</sup> and July 25<sup>th</sup>, 2018.

The scope of this investigation was to indicate the presence or absence of wetlands, identify any wetlands that could be impacted by the project, and delineate upper boundaries of potential jurisdictional wetlands in the project area. Waters of the United States (WUS), which includes lakes, ponds, rivers, and streams, were also included in the delineation. This report is used by the United States Army Corps of Engineers (USACE) and the Iowa Department of Natural Resources (IDNR). The USACE has discretion to use this report to make jurisdictional determinations and enforce Section 404 of the Clean Water Act. The IDNR uses this report to enforce Section 401 of the Clean Water Act.

The information and recommendations presented in this report are professional opinions based on visual observation, review of available data, and interpretation of available public records. The opinions and recommendations presented apply to the subject property at the time of the Shive-Hattery, Inc. investigation.

### Background

### General Description of Project Area

The project boundary is located just south of Princeton, Iowa (Figure 1, Project Area Location). The project boundary is situated in Section 3, 10, 11, 14, and 15 of Township 79 North, Range 5 East in Scott County. The site is bordered by US Highway 67 to the east, and neighboring farmed croplands to the north, west, and the south. The project area consists of open farmed croplands of corn and soybean with some forested areas to the northern and eastern portions of the site. Bud Creek intersects the site and drains into the Mississippi River.

The property owners, the Anderson Family, is in the IEDA Green Certification Program process of obtaining site certification from the Iowa Economic Development Authority (IEDA) for their 400 acre property for the development of an eco-friendly designed business park.

Prior to field investigations, several map and aerial photograph resources were reviewed to assist with identifying wetland areas and other WUS in the project area. Each source of information included as part of this investigation is described below.

### USGS Topographic Maps and LiDAR Data

The United States Geological Survey (USGS) 7.5-Minute Topographic Map (Figure 2, USGS Topographic Map) includes towns, roads, streams, landmark features, contour lines, general delineation of wet areas, drainage, and general land uses. This was used to identify drainages or WUS within the project area. In addition, LiDAR 2-foot contours were obtained to assess the drainage of the survey area (Figure 3, LiDAR 2-Foot Contour Map).

The survey area is farmed rolling hills with intermittent patches of woodland in low-lying areas. Bud Creek, a perennial stream, enters the project area from the west-central portion of the site and exits the southwest portion of the site, where it ultimately drains into the Mississippi River. An unnamed perennial

stream enters the project area from the south-central boundary. This stream drains into the aforementioned Bud Creek. The map also shows a home farmstead on the property.

### National Wetland Inventory

The National Wetlands Inventory (NWI) maps are produced at a scale of 1:24,000. Wetlands on NWI maps are classified in accordance with Cowardin et al. (1979), and depict probable wetland areas based on stereoscopic analysis of high altitude aerial photographs. The NWI map was reviewed to identify potential wetland areas located on the project site. As shown in Figure 4, National Wetlands Inventory, the following wetland areas were identified in the project area:

- PEMCx: Palustrine, Emergent, Seasonally Flooded, Excavated
- R2UBF: Riverine, Lower Perennial, Unconsolidated Bottom, Semi-permanently Flooded
- R2UBG: Riverine, Lower Perennial, Unconsolidated Bottom, Intermittently Exposed

### **USDA Soil Survey**

The Scott County Soil Survey provided by the United States Department of Agriculture (USDA) was used to identify the hydric soils in the project area. As shown in Figure 5, NRCS Soil Survey Data, 2 soils with hydric components are indicated in the project area. The Soil Map Unit, Soil Description, and Hydric Soil Rating status for the soils of the delineation area are listed in **Table 1**.



Soil Map Unit	Description	Hydric Soil
20D2	Killduff silty clay loam, 9 to 14 percent slopes, eroded	Yes
65G	Lindley loam, 25 to 40 percent slopes	No
120B2	Tama silty clay loam, 2 to 5 percent slopes, eroded	No
120C2	Tama silty clay loam, 5 to 9 percent slopes, eroded	No
179F2	Gara loam, 18 to 25 percent slopes, moderately eroded	No
273C	Olmitz loam, 3 to 9 percent slopes	No
673E3	Timula silt loam, 14 to 18 percent slopes, severely eroded	No
763E3	Exette silt loam, 14 to 18 percent slopes, severely eroded	No
820B	Dockery silt loam, 2 to 5 percent slopes	Yes
M162B	Downs silt loam, till plain, 2 to 5 percent slopes	No
M162C2	Downs silt loam, till plain, 5 to 9 percent slopes, eroded	No
M162D2	Downs silt loam, till plain, 9 to 14 percent slopes, eroded	No
M162D3	Downs silty clay loam, till plain, 9 to 14 percent slopes, severely eroded	No
M163C2	Fayette silt loam, till plain, 5 to 9 percent slopes, eroded	No
M163D2	Fayette silt loam, till plain, 9 to 14 percent slopes, eroded	No
M163E2	Fayette silt loam, till plain, 14 to 18 percent slopes, eroded	No
M163F	Fayette silt loam, till plain, 18 to 25 percent slopes	No
M163F2	Fayette silt loam, till plain, 18 to 25 percent slopes, eroded	No
M163F3	Fayette silty clay loam, till plain, 18 to 25 percent slopes, severely eroded	No

### Table 1: Soil Map Units and Descriptions

### Climate Data

An evaluation of the antecedent precipitation and climate conditions for the site was conducted using multiple sources of available data. Weather conditions during the wetland delineation on July 24, 2018 were sunny at approximately 72° F with winds blowing from the southeast at approximately 12 mph. On July 25, 2018 the weather conditions were sunny at approximately 70° F with winds blowing from the east/southeast at approximately 12 mph. The area received 1.17 inches of rain the week prior to the wetland delineation.<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> https://www.wunderground.com/history/

Current climate data was obtained from the NRCS Field Office Technical Guide (FOTG) website for LE CLAIRE L & D 14, IA. The average temperature in June, the month prior to delineation, was 74.0° F. Total precipitation recorded in June 2018 was 7.61 inches, as shown in **Table 2**. Additionally, precipitation and temperature data for the month of July was also reviewed, as shown in **Table 3**. The average climate data for the days in July preceding delineation were an average temperature of 76.2° F and total precipitation of 3.3 inches.

Date	Max Temperature	Min Temperature	Avg Temperature	GDD Base 40	GDD Base 50	Precipitation
2018-06-01	90	70	80	40	30	0
2018-06-02	90	57	73.5	34	24	0
2018-06-03	82	56	69	29	19	0
2018-06-04	79	56	67.5	28	18	0
2018-06-05	83	56	69.5	30	20	0
2018-06-06	90	58	74	34	24	0
2018-06-07	88	57	72.5	33	23	0.46
2018-06-08	89	64	76.5	37	27	0
2018-06-09	79	62	70.5	31	21	1.88
2018-06-10	84	65	74.5	35	25	0.77
2018-06-11	76	64	70	30	20	0
2018-06-12	75	65	70	30	20	0.01
2018-06-13	82	68	75	35	25	0
2018-06-14	79	64	71.5	32	22	0
2018-06-15	71	64	67.5	28	18	0
2018-06-16	91	66	78.5	39	29	0
2018-06-17	93	74	83.5	44	34	0
2018-06-18	90	78	84	44	34	0
2018-06-19	93	73	83	43	33	0
2018-06-20	84	69	76.5	37	27	0.15
2018-06-21	83	68	75.5	36	26	3.45
2018-06-22	76	62	69	29	19	0.35
2018-06-23	70	62	66	26	16	0.05
2018-06-24	80	64	72	32	22	0
2018-06-25	81	64	72.5	33	23	0
2018-06-26	81	63	72	32	22	0
2018-06-27	80	67	73.5	34	24	0.49
2018-06-28	82	67	74.5	35	25	0
2018-06-29	85	69	77	37	27	0
2018-06-30	90	71	80.5	41	31	0
Average Sum	<b>83.2</b> CIS – NOAA Region	64.8	74	1028	728	7.61

### Table 2: Climatological Data for LE CLAIRE L & D 14, IA – June 2018

Data generated by ACIS – NOAA Regional Climate Centers

\* DAILY DATA FOR A MONTH - daily maximum, minimum and average temperature (degrees F), base 40 and base 50 growing degree days (GDD), and precipitation for all days of the selected month. Basic monthly summary statistics are also provided. Values of 'M' indicate missing data and values of 'T' indicate a trace.

Date	Max Temperature	Min Temperature	Ávg Temperature	GDD Base 40	GDD Base 50	Precipitation
2018-07-01	93	71	82	42	32	0
2018-07-02	88	65	76.5	37	27	0
2018-07-03	85	65	75	35	25	0
2018-07-04	88	65	76.5	37	27	0
2018-07-05	92	76	84	44	34	0.13
2018-07-06	89	67	78	38	28	0
2018-07-07	81	60	70.5	31	21	0
2018-07-08	83	60	71.5	32	22	0
2018-07-09	86	65	75.5	36	26	0
2018-07-10	91	68	79.5	40	30	0
2018-07-11	89	69	79	39	29	0
2018-07-12	88	70	79	39	29	0
2018-07-13	91	71	81	41	31	0
2018-07-14	91	71	81	41	31	1.95
2018-07-15	83	70	76.5	37	27	0
2018-07-16	86	70	78	38	28	М
2018-07-17	86	66	76	36	26	0
2018-07-18	86	66	76	36	26	0
2018-07-19	81	65	73	33	23	0
2018-07-20	76	64	70	30	20	1.13
2018-07-21	76	64	70	30	20	0.02
2018-07-22	82	65	73.5	34	24	0.02
2018-07-23	74	65	69.5	30	20	0.00
Average Sum	85.4	66.9	76.2	836	606	3.3

#### Table 3: Climatological Data for LE CLAIRE L & D 14, IA – July 2018

Data generated by ACIS – NOAA Regional Climate Centers

\* DAILY DATA FOR A MONTH - daily maximum, minimum and average temperature (degrees F), base 40 and base 50 growing degree days (GDD), and precipitation for all days of the selected month. Basic monthly summary statistics are also provided. Values of 'M' indicate missing data and values of 'T' indicate a trace.

### **Methodology**

The wetland delineation was conducted on July 24<sup>th</sup> and 25<sup>th</sup>, 2018 by Jake Wilson (Environmental Scientist) and Stacey Brockett (Landscape Architect Intern), both of Shive-Hattery, during a pedestrian field survey using the Routine On-Site Determination Method as defined in the *1987 Corps of Engineers Wetlands Delineation Manual* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual*: *Midwest Region [Version 2.0] (2010 Midwest Supplement)*. Wetlands are defined by the USACE and the Environmental Protection Agency (EPA) as:

"Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." (Corps 1987).

Under normal conditions, if one or more of the wetland criteria are not identified, the area was not considered a wetland. If all three wetland indicators were identified, the area was classified a wetland. Additional observations were made throughout the wetland areas to define the wetland/non-wetland boundary, which was mapped with GPS technology. Vegetation, soil, and hydrology assessment data from at least one location within each wetland and the characteristics of one upland location outside of the wetlands were recorded on a USDA Wetland Determination Form. Data forms for this wetland delineation are enclosed in Appendix C and the data point locations are shown in Figure 6.

### Plant Community Assessment

The project area was visually assessed to determine plant species and absolute ground cover percentage of four plant community stratums including tree, sapling/shrub, herbaceous, and woody vine. The vegetation for each stratum was identified using various plant identification guides.

Each dominant species of observed vegetation was assessed for its wetland indicator status. Indicator status was assessed using the USDA *The PLANTS Database* (USDA, NRCS 2018) and the *National List of Plant Species that Occur in Wetlands – Region 3* (Reed 1988). The indicator status for vegetation are:

- Obligate Wetland (OBL) occurs almost always (estimated probability greater than 99%) under natural conditions in wetlands.
- Facultative Wetland (FACW) usually occur in wetland (estimated probability 67% 99%), but occasionally found in non-wetlands.
- Facultative (FAC) equally likely to occur in wetlands or non-wetlands (estimated probability 34% 66%).
- Facultative Upland (FACU) usually occur in non-wetlands (estimated probability 67% -99%), but occasionally found in wetlands.
- Obligate Upland (UPL) rarely occurs in wetlands, but occur almost always (estimated probability greater than 99%) under natural conditions in non-wetlands.

### Hydric Soil Assessment

Subsurface soil samples were collected to a depth of approximately 24 inches. These samples were assessed using Munsell Soil Color Charts (Munsell 1994). The soil samples were also evaluated for hydric soil indicators listed on the USACE Midwest Region Wetland Determination Data Form. The soil was considered hydric if the appropriate hydric indicators were observed in the subsurface soil sample.

### Wetland Hydrology Assessment

Potential wetland areas were visually assessed for wetland hydrology indicators. To be considered having wetland hydrology, an area had to have one (1) primary or two (2) secondary indicators present.

# Wetland Delineation Findings

Field investigations were performed on July 24 and July 25, 2018 by Shive-Hattery to identify potential WUS, including wetlands. Four emergent wetland, one scrub/shrub wetland, one forested wetland, two perennial streams, two ephemeral streams, and four erosional features were delineated within the project area: WL1, WL2, WL3, WL4, WL5, WL6, PS1, PS2, ES1, ES2, EF1, EF2, EF3, and EF4. A summary of characteristics are provided in **Table 4**. The attached data forms (Appendix C) document

additional detail on the dominant plant species, results of the soil sampling, and hydrology observations for each sample point. Photographs of delineated wetlands, as well as other potential WUS, are provided in Appendix A.

#### Wetland WL1

0.05 acres Data Points: W1, U1

Wetland WL1 is an emergent, palustrine wetland located along the northwestern portion of the project area. This wetland area is not identified on the NWI and is a depressional area that lies within a grassed waterway with an erosional feature (EF1) located within it. The upland/wetland transition is marked by both a change in slope as well as a notable change in vegetation. Dominant vegetation within this wetland consists of cattail (*Typha latifolia*), giant goldenrod (*Solidago gigantea*), and common milkweed (*Asclepias syriaca*). Because this wetland has a hydrologic connection to Bud Creek through an erosional feature (EF1), and ultimately the Mississippi River, this wetland is likely jurisdictional WUS.

#### Wetland WL2

0.07 acres Data Points: W2, U2

Wetland WL2 is an emergent, palustrine wetland located along the northwestern portion of the project area. This wetland area is not identified on the NWI and is a depressional area that lies within a grassed waterway with an erosional feature (EF1) located within it. The upland/wetland transition is marked by both a change in slope as well as a notable change in vegetation. Dominant vegetation within this wetland consists of black willow (*Salix nigra*), reed canarygrass (*Phalaris arundinacea*), American fox sedge (*Carex vulpinoidea*), and common milkweed (*Asclepias syriaca*). Because this wetland has a hydrologic connection to Bud Creek through an erosional feature (EF1), and ultimately the Mississippi River, this wetland is likely jurisdictional WUS.

#### Wetland WL3

0.40 acres Data Points: W3, U3

Wetland WL3 is a forested, palustrine wetland located along the northern portion of the project area. This wetland area is not identified on the NWI. This wetland is a low-lying area along an unnamed ephemeral stream (ES1). The upland/wetland transition is marked by both a change in slope as well as a notable change in vegetation. Dominant vegetation within this wetland consists of common hackberry (*Celtis occidentalis*), white mulberry (*Morus alba*), Japanese honeysuckle (*Lonicera japonica*), Longstyle Sweetroot (*Osmorhiza longistylis*), and wood nettle (*Laportea Canadensis*). Because this wetland has a hydrologic connection to Bud Creek through an unnamed ephemeral stream (ES1), and ultimately the Mississippi River, this wetland is likely jurisdictional WUS.

#### Wetland WL4

0.25 acres Data Points: W4, U4

Wetland WL4 is a scrub/shrub, palustrine wetland located along the southeastern portion of the project area. This wetland area is not identified on the NWI. This wetland is a low-lying area within a waterway.



The upland/wetland transition is marked by both a change in slope as well as a notable change in vegetation. Dominant vegetation within this wetland consists of black willow (*Salix nigra*) and reed canarygrass (*Phalaris arundinacea*). Because this wetland has a direct hydrologic connection to the Mississippi River, it is likely jurisdictional WUS.

### Wetland WL5

0.71 acres Data Points: W5, U5

Wetland WL5 is an emergent, palustrine wetland located along the eastern portion of the project area along the entrance drive and US Highway 67. This wetland area is not identified on the NWI. The upland/wetland transition is marked by both a change in slope as well as a notable change in vegetation. Dominant vegetation within this wetland consists of American sycamore (*Platanus occidentalis*) and reed canarygrass (*Phalaris arundinacea*). This wetland is directly connected to Bud Creek (PS1) and is likely jurisdictional WUS.

#### Wetland WL6

0.10 acres Data Points: W6, U6

Wetland WL6 is an emergent, palustrine wetland located along the southeastern portion of the project area. This wetland area is not identified as on the NWI. The upland/wetland transition is marked by both a change in slope as well as a notable change in vegetation. Dominant vegetation within this wetland consists of reed canarygrass (*Phalaris arundinacea*). Because this wetland has a direct hydrological connection to the Mississippi River, it is likely jurisdictional WUS.

### Perennial Stream PS1

Perennial stream PS1 is a named stream, Bud Creek, which enters the project area from the west and occupies approximately 7,362 linear feet of the project area, until it exits and drains into the Mississippi River on the east boundary of the project area. The stream has well-vegetated vertical banks for its entire length through the project area. This stream is identified as R2UBF on the NWI. The stream had flowing, clear water at the time of delineation with a stream bottom substrate that was predominately sand and silt, with riffles consisting of cobble and gravel. This perennial stream has an ordinary high water mark and is directly connected to the Mississippi River. The stream is likely considered jurisdictional WUS.

### Perennial Stream PS2

Perennial stream PS2 is an unnamed perennial stream that enters the project area from the south edge of the project boundary. The stream occupies approximately 2,509 linear feet of the project area until its confluence with Bud Creek (PS1). The stream has well-vegetated vertical banks for its entire length through the project area. This stream is identified as PEMCx on the NWI. The stream had flowing, clear water at the time of delineation with a stream bottom substrate that was predominately sand and silt. This perennial stream has an ordinary high water mark and is directly connected to Bud Creek, which is directly connected to the Mississippi River. The stream is likely considered jurisdictional WUS.

### Ephemeral Stream ES1

Ephemeral stream ES1 is an unnamed ephemeral stream that enters the project area from the northeast boundary of the project area and occupies approximately 1,866 linear feet of the project area, until it drains into Bud Creek PS1. The stream has sparsely vegetated vertical banks for its entire length through the project area. This stream is not identified on the NWI. The stream was dry at the time of delineation. The stream bottom substrate that was predominately sand and silt. This ephemeral stream has an ordinary high water mark and is directly connected to Bud Creek (PS1). The stream is likely considered jurisdictional WUS.

### **Ephemeral Stream ES2**

Ephemeral stream ES2 is an unnamed ephemeral stream that starts in the west portion of the project area from overland drainage from adjacent crop land and occupies approximately 266 linear feet until it drains into Bud Creek (PS1). The stream has sparsely vegetated vertical banks for its entire length through the project area. This stream is not identified on the NWI. The stream had minimal flow of clear water at the time of delineation with a stream bottom substrate that was predominately sand and silt. This ephemeral stream has an ordinary high water mark and is directly connected to Bud Creek (PS1). The stream is likely considered jurisdictional WUS.

### **Erosional Feature EF1**

Erosional feature EF1 is a "V" shaped ditch that enters the study area from the north boundary in the western portion of the study area and occupies approximately 1,133 linear feet of the project area. This erosional feature is a shallow ditch that runs through a grassed waterway and intersects wetlands WL1 and WL2. The erosional feature is not identified on the NWI and lacked flowing water at the time of delineation. The erosional feature lacks a well-defined bed and bank, or an ordinary high mark. As a result, this erosional feature is likely not jurisdictional WUS.

### **Erosional Feature EF2**

Erosional feature EF2 is a "V" shaped ditch that enters the study area from the southeastern portion of the study area after it exits from wetland WL4 and occupies approximately 253 linear feet of the project area until it enters wetland WL6. It has steeply sloping banks that are sparsely vegetated. The ditch is not identified on the NWI and lacked flowing water at the time of delineation. The ditch lacks a well-defined bed and bank, or an ordinary high mark. The erosional feature is likely not jurisdictional WUS.

#### **Erosional Feature EF3**

Erosional feature EF3 is a "V" shaped ditch that begins as a knick-point from the adjacent farm field. The ditch occupies approximately 97 linear feet of the project area. It has steeply sloping banks that are not vegetated. The ditch is not identified on the NWI and lacked flowing water at the time of delineation. The ditch lacks a well-defined bed and bank, or an ordinary high mark. The erosional feature is likely not jurisdictional WUS.

#### **Erosional Feature EF4**

Erosional feature EF4 is a "V" shaped ditch that occupies approximately 135 linear feet of the project area. It has steeply sloping banks that are not vegetated. The ditch is not identified on the NWI and lacked flowing water at the time of delineation. The ditch lacks a well-defined bed and bank, or an ordinary high mark. The erosional feature is likely not jurisdictional WUS.

Area ID	Dominant Vegetation	Hydric Soil Indicator	Hydrology Indicators
WL1	Typha latifolia Solidago gigantea Asclepias syriaca	F6: Redox Dark Surface	D2: Geomorphic Position D5: FAC-Neutral Test
WL2	Salix nigra Phalaris arundinacea Carex vulpinoidea Asclepias syriaca	F6: Redox Dark Surface	D2: Geomorphic Position D5: FAC-Neutral Test
WL3	Celtis occidentalis Morus alba Lonicera japonica Osmorhiza longistylis Laportea Canadensis	F3: Depleted Matrix	D2: Geomorphic Position D5: FAC-Neutral Test
WL4	Salix nigra Phalaris arundinacea	F6: Redox Dark Surface	D2: Geomorphic Position D5: FAC-Neutral Test
WL5	Platanus occidentalis Phalaris arundinacea	F3: Depleted Matrix	D2: Geomorphic Position D5: FAC-Neutral Test
WL6	Phalaris arundinacea	F6: Redox Dark Surface	D2: Geomorphic Position D5: FAC-Neutral Test
PS1	NA	NA	NA
PS2	NA	NA	NA
ES1	NA	NA	NA
ES2	NA	NA	NA
EF1	NA	NA	NA
EF2	NA	NA	NA
EF3	NA	NA	NA
EF4	NA	NA	NA

# Table 4. Project Area Wetlands and Potential WUS

# **Conclusions and Recommendations**

Shive-Hattery has performed a Wetland Delineation in conformance with the *1987 Corps of Engineers Wetlands Delineation Manual and the Midwest Regional Supplement* of the proposed Anderson 400 Green Business Park project in Princeton, Iowa. Based on the wetland delineation, four (4) emergent wetlands, one (1) scrub/shrub wetland, one (1) forested wetland, two (2) perennial streams, and two (2) ephemeral streams identified within the project boundary are likely under jurisdiction of the USACE.

Four (4) erosional features within the project boundary are likely not under the jurisdiction of the USACE.

Through the IEDA certification and the green business park process, ordinances and covenants will be in place through applicable governing agencies through buffer zones of 100 feet or more to protect the habitat and features that exist on the property today.

Discharges of dredged or fill material, excavation, and mechanized land clearing in the WUS will require authorization from the USACE. Final determination of the limit of WUS, including wetlands, for permitting purposes rests with the USACE. For final authorization for activities in WUS, the USACE must approve the findings found within this report. No construction activities should commence prior to receiving wetland boundary approvals and relevant permits.

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Appendix A - Photographs



Photo 1: Looking southeast at emergent wetland WL1 from Data Point W1.



**Photo 2:** Looking west at upland area adjacent to wetland WL1 from Data Point U1.



**Photo 3:** Looking east at emergent wetland WL2 and Data Point W2.



**Photo 4:** Upland data point U2 adjacent to wetland WL2. View looking northeast.



Photo 5: Forested wetland WL3 and adjacent upland. Ephemeral stream ES1 flows through center of wetland. View looking east.



**Photo 6:** Scrub/shrub wetland WL4. View looking west.



Photo 7: Emergent wetland WL5 and adjacent perennial stream PS1. View looking east.



**Photo 8:**.Emergent wetland WL6. Adjacent upland can be seen in the background.



**Photo 9:** Perennial stream PS1. View looking upstream and to the west.



**Photo 10:** Perennial stream PS1. View looking downstream and to the east.



**Photo 9:** Perennial stream PS2. View looking upstream and to the south.



**Photo 10:** Perennial stream PS2. View looking downstream and to the north. The confluence with Bud Creek is close to here.



**Photo 11:** Ephemeral stream ES1. View looking downstream and to the southeast.



**Photo 12:** Ephemeral stream ES1. View looking upstream and to the north.



**Photo 13:** Ephemeral stream ES2. View looking downstream and to the north.



**Photo 14:** Erosional feature EF1. Start of the v-shaped ditch in agricultural field. View looking southeast.



Photo 15: Erosional feature EF2. Ditch is located in thick undergrowth. View looking west.



**Photo 16:** Erosional feature EF3. Photo shows the start of the knick-point.



**Photo 17:** Erosional feature EF4. View looking south.



Photo 18: View looking northwest of northwest corner of property. Rolling hills are apparent.



**Photo 19:** View looking southeast of the southwest corner of the property.



**Photo 20:** View looking east of the southeast corner of the property.



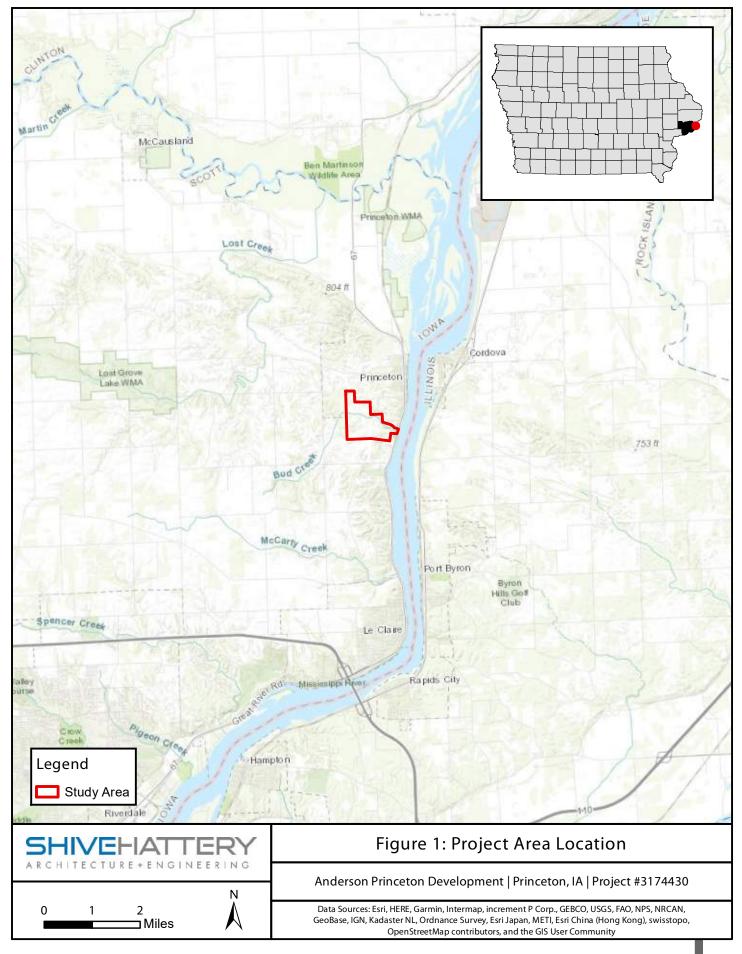
Photo 21: Japanese hops (*Humulus japonicus*) have started to invade the banks of perennial stream PS1.

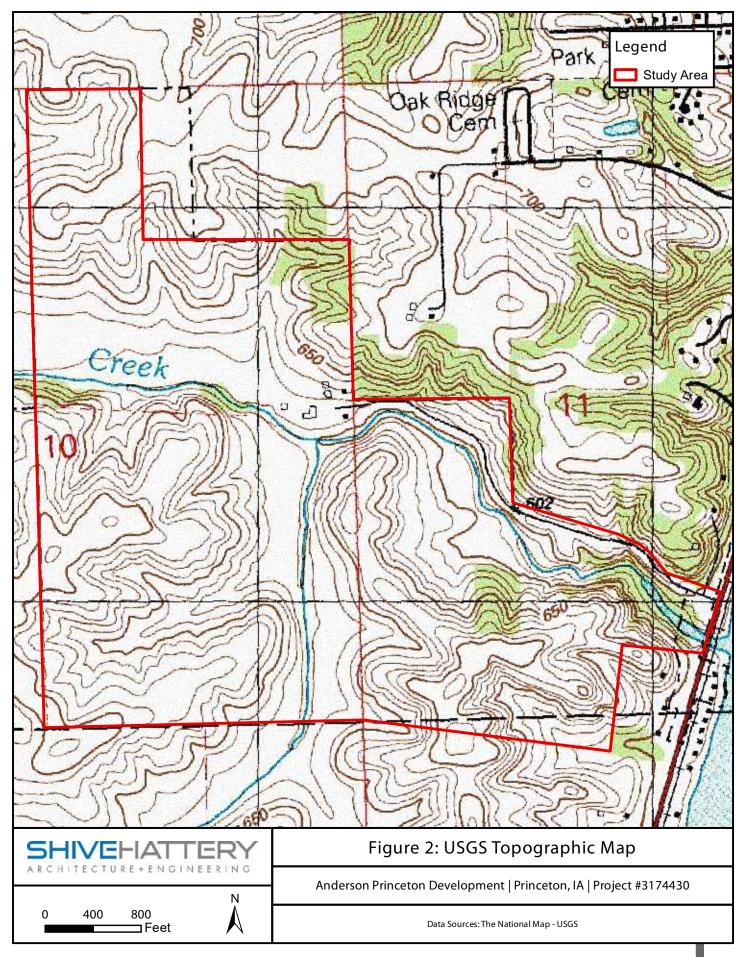


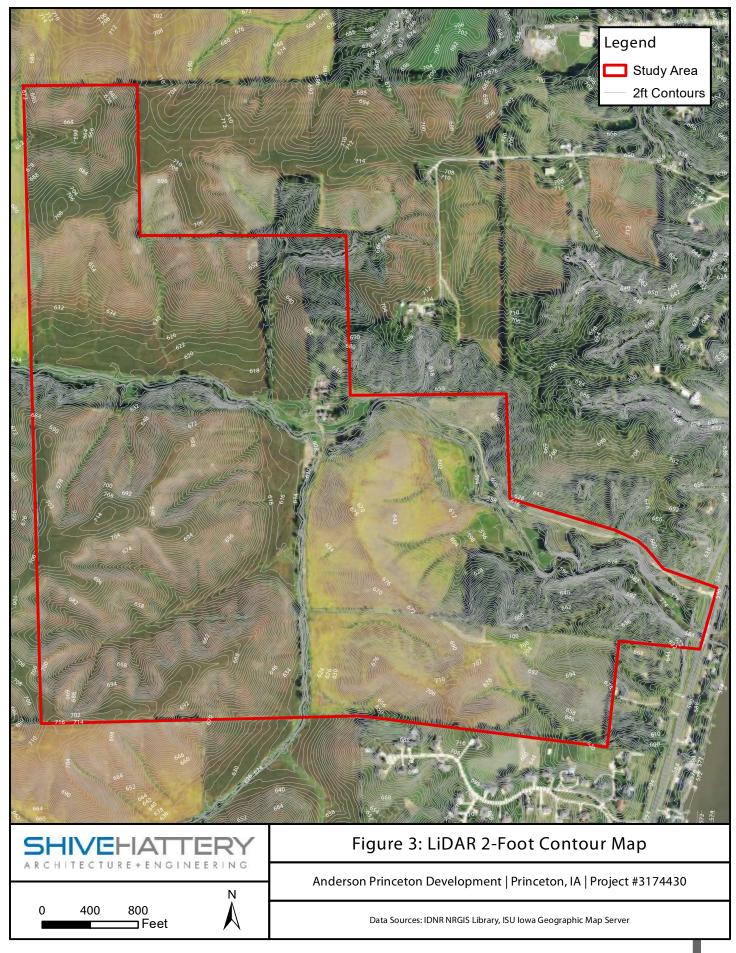
**Photo 22:** Forested uplands in the northeast corner of the property. View looking east.

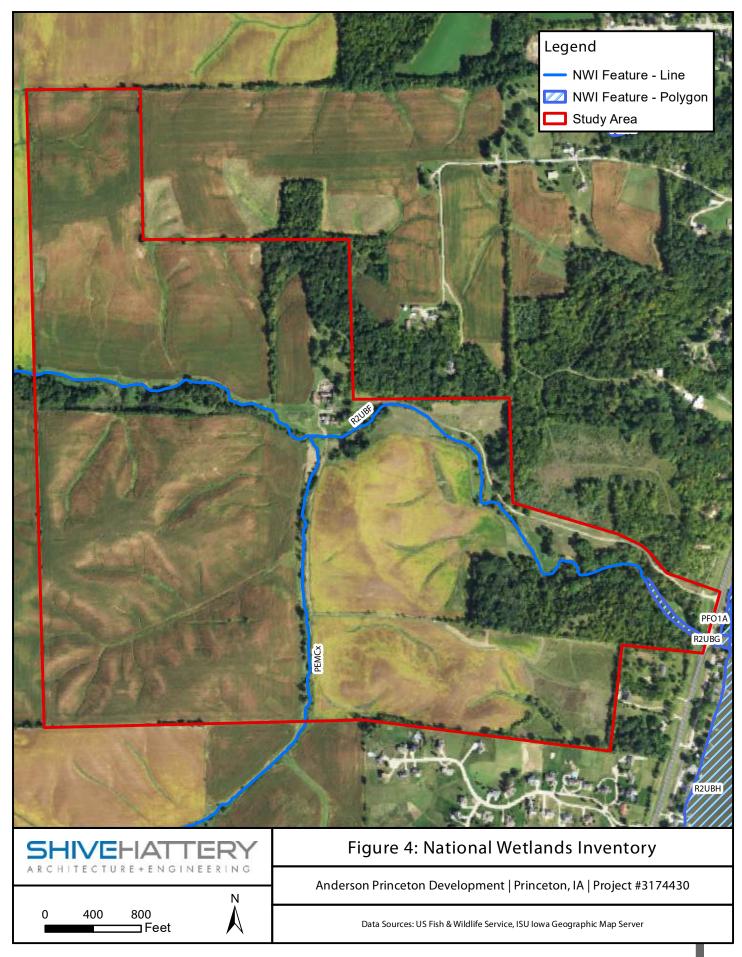
# **Appendix B - Figures**

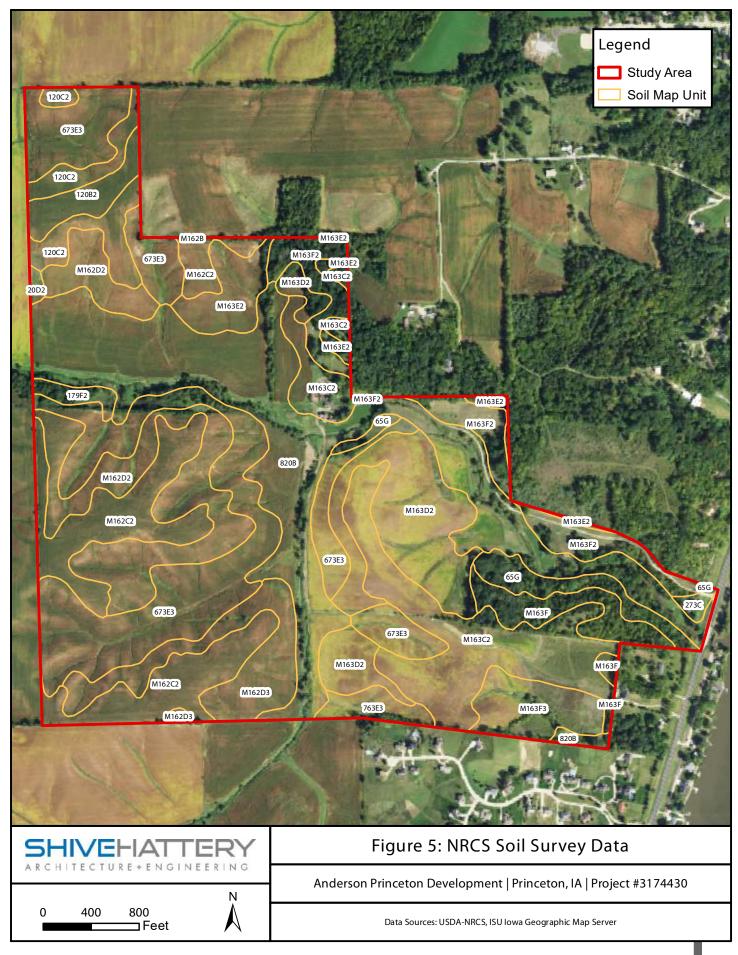
Figure 1: Project Area Location Figure 2: USGS Topographic Map Figure 3: LiDAR 2-foot Contour Map Figure 4: National Wetland Inventory Map Figure 5: NRCS Soil Survey Data Map Figure 6: Wetland Delineation Map Figure 6a: Wetland Delineation Map, Detail View

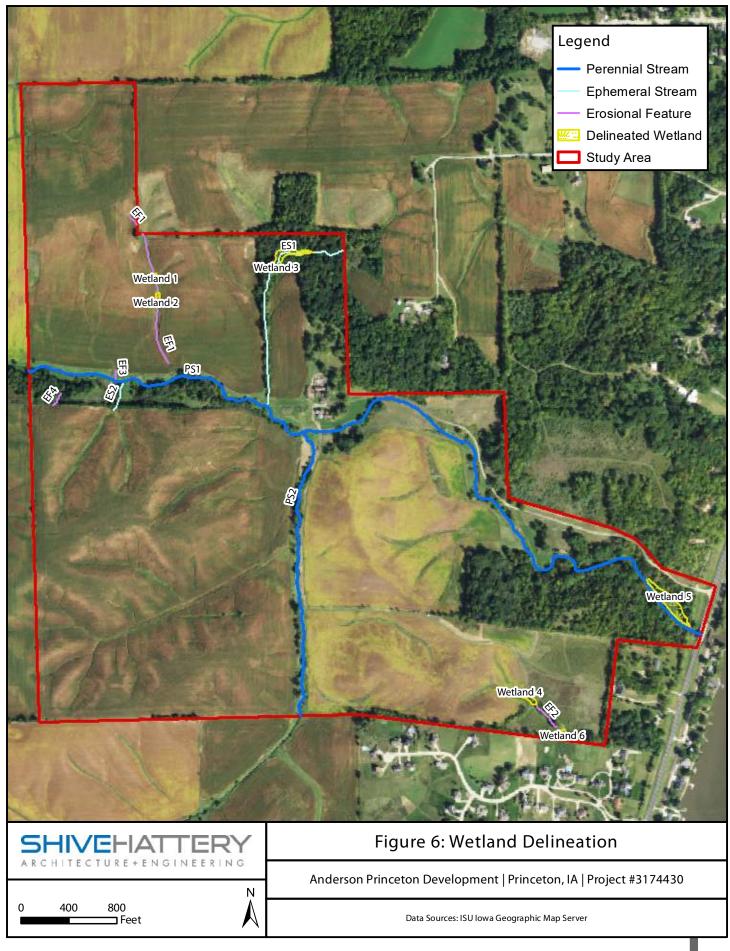


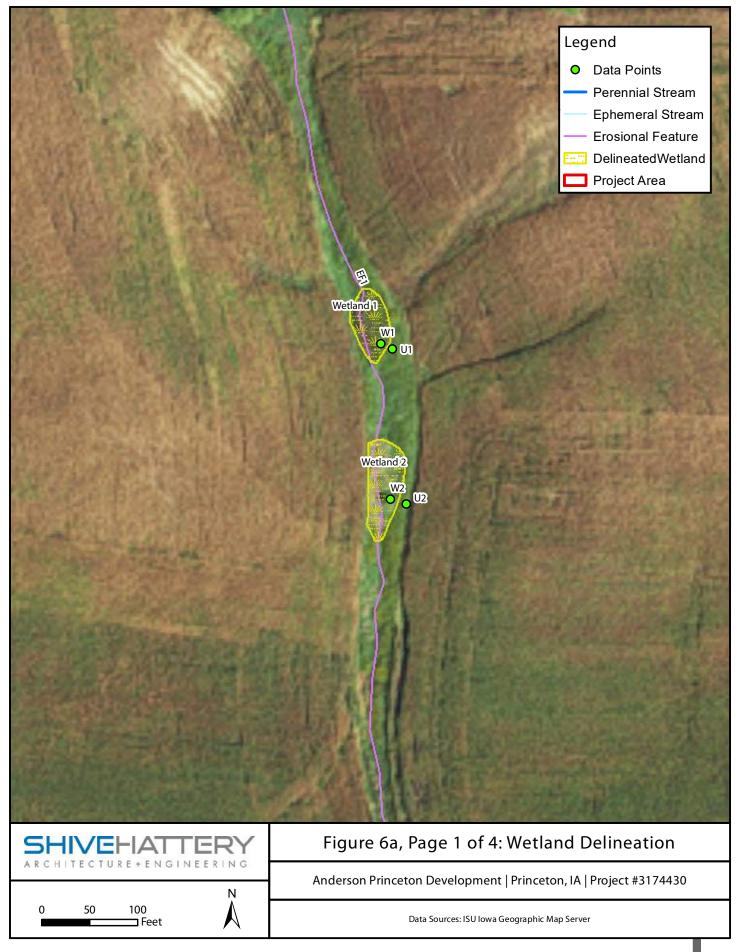


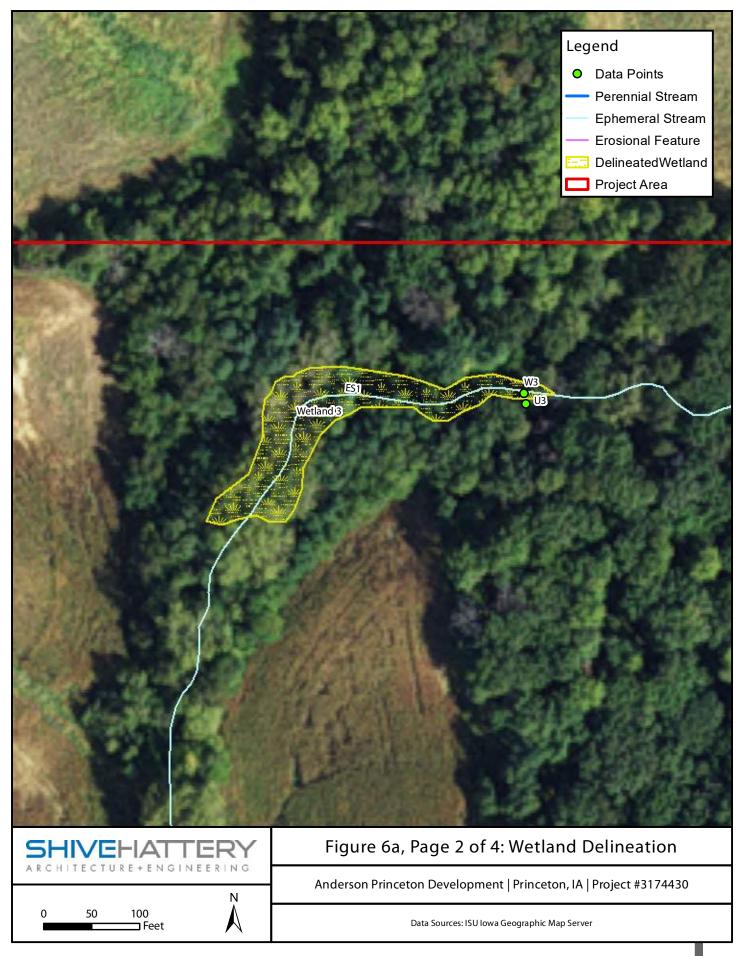


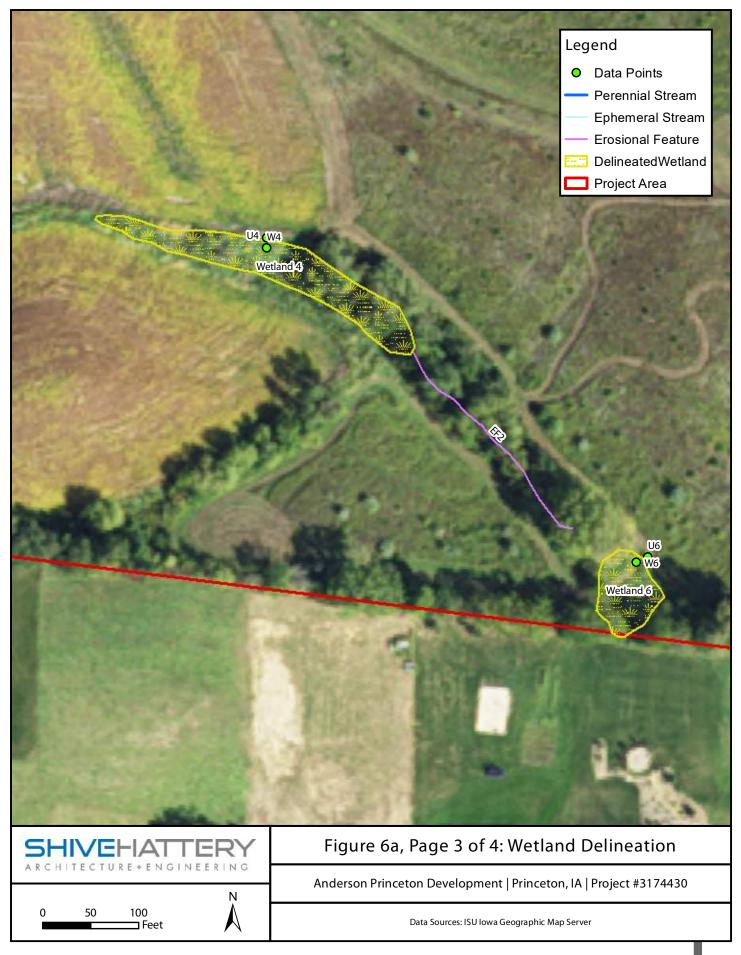


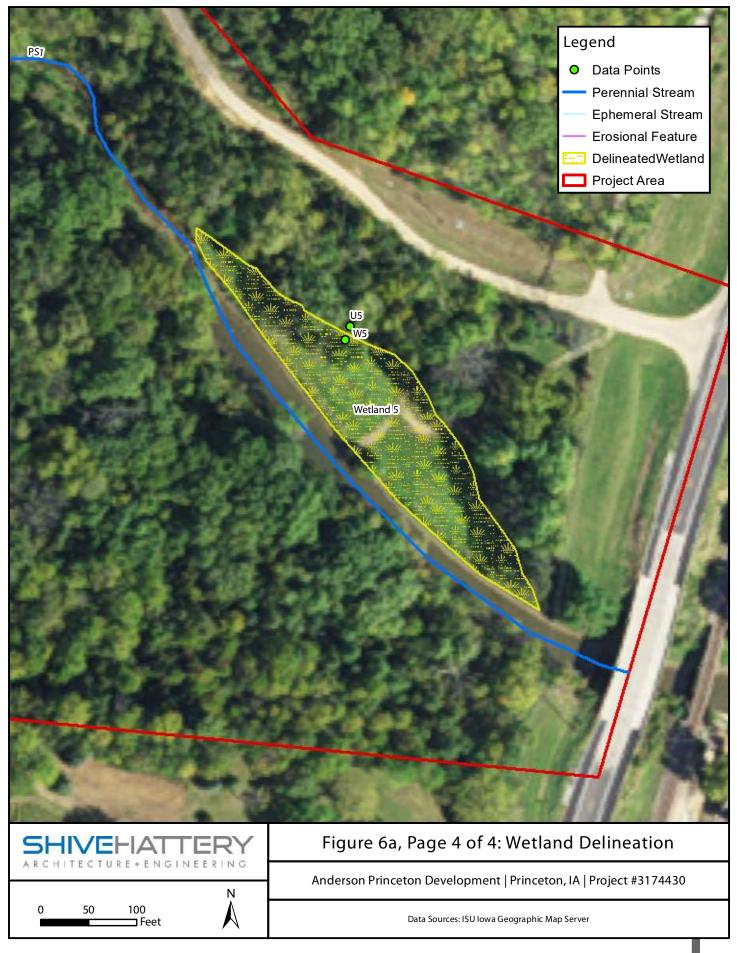












Appendix C – Wetland Delineation Data Forms

Project/Site: Anderson Princeton Development		City/Cour	nty: Princeton,	lowa	Sampling Date:	7/24/2018
Applicant/Owner: Paul and Marijo Anderson				State: IA	Sampling Point:	W1 (1)
Investigator(s): Wilson/Brockett		Section,	Township, Ran	ge: <u>Sec 10, T 79 N, R</u>	5 E	
Landform (hillside, terrace, etc.): Drainageway			Local relief (c	concave, convex, none	): Concave	
Slope (%): 0-2% Lat: 41.665592		Long: -	-90.360544		Datum: NAD 83	1
Soil Map Unit Name Timula				NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical	for this time	e of year?	Yes X N	o (If no, explain	in Remarks.)	
Are Vegetation, Soil, or Hydrology	signifi	cantly disturbe	ed? Are "Nor	mal Circumstances" pr	esent? Yes	X No
Are Vegetation, Soil, or Hydrology				d, explain any answers		
SUMMARY OF FINDINGS – Attach site n				cations, transect	s, important fe	eatures, etc.
Hydrophytic Vegetation Present? Yes X	No	Is th	e Sampled Are	a		
Hydric Soil Present? Yes X			in a Wetland?	Yes X	No	
Wetland Hydrology Present? Yes X	No					
Remarks:						
VEGETATION – Use scientific names of pl		Deminant	Indicator			
Tree Stratum (Plot size: )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test w	orksheet:	
1.           2.				Number of Dominan That Are OBL, FAC\		2 (A)
3.				Total Number of Dor	· · · · · · · · · · · · · · · · · · ·	(*)
4.				Species Across All S		2 (B)
5.				Percent of Dominan	t Species	
<u>Sapling/Shrub Stratum</u> (Plot size: 15	)	=Total Cover		That Are OBL, FAC	W, or FAC: 10	00.0% (A/B)
1				Prevalence Index w	vorksheet:	
2.				Total % Cover	of: Mult	tiply by:
3		·		· ·	80 x 1 =	80
4		·		-	<u>70</u> x 2 =	140
5		=Total Cover		FAC species	$0 \times 3 =$	
Herb Stratum (Plot size: 5 )		= I otal Cover		FACU species UPL species	10   x4 = 0   x5 = 0	
1. Typha latifolia	80	Yes	OBL	·	160 (A)	260 (B)
2. Solidago gigantea	70	Yes	FACW		idex = B/A =	1.63
3. Asclepias syriaca	10	No	FACU			
4.				Hydrophytic Veget	ation Indicators:	
5					or Hydrophytic Veg	getation
6				X 2 - Dominance		
7				X 3 - Prevalence I		
8					al Adaptations <sup>1</sup> (Pr rks or on a separat	
9					drophytic Vegetatio	,
10	160	=Total Cover		<sup>1</sup> Indicators of hydric		, , ,
<u>Woody Vine Stratum</u> (Plot size: <u>30</u> )				be present, unless d		
1				Hydrophytic		
<u> </u>		=Total Cover	<u> </u>	Vegetation Present?	res X No	
Remarks: (Include photo numbers here or on a sep	orate about					
		· /				

Sampling Point:	W1	(1)	

	scription: (Descri Matrix	be to the de		<b>cument t</b> ox Featur		tor or co	nfirm the absence	of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	% realur	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
<u> </u>				/0	Туре	LUC		Remains
0-4	10YR 3/2	100					Loamy/Clayey	
4-10	10YR 3/2	90	7.5YR 4/6	10	С	M	Loamy/Clayey	Prominent redox concentrations
10-24	10YR 4/4	100					Loamy/Clayey	
<sup>1</sup> Type: C=	Concentration, D=D	epletion, RM	=Reduced Matrix,	MS=Mas	ked Sanc	Grains.	<sup>2</sup> Location: PL=	Pore Lining, M=Matrix.
	il Indicators:							or Problematic Hydric Soils <sup>3</sup> :
Histos	ol (A1)		Sandy Gle	yed Matri	ix (S4)		Coast P	rairie Redox (A16)
Histic	Epipedon (A2)		Sandy Rec	lox (S5)			Iron-Ma	nganese Masses (F12)
Black	Histic (A3)		Stripped M	atrix (S6)	)		Red Par	ent Material (F21)
Hydro	gen Sulfide (A4)		Dark Surfa	ce (S7)			Very Sh	allow Dark Surface (TF12)
Stratif	ied Layers (A5)		Loamy Mu	cky Mine	ral (F1)		Other (E	xplain in Remarks)
2 cm I	Muck (A10)		Loamy Gle	yed Matr	ix (F2)			
·	ted Below Dark Sur	( )	Depleted N	•			-	
	Dark Surface (A12)		X Redox Dar		• •			f hydrophytic vegetation and
	Mucky Mineral (S1		Depleted D		• •		wetland	hydrology must be present,
5 cm I	Mucky Peat or Peat	(S3)	Redox Dep	pressions	(F8)		unless c	listurbed or problematic.
Restrictiv	e Layer (if observe	ed):						
Туре:								
Depth (ii	nches):		_				Hydric Soil Pres	sent? Yes <u>X</u> No
	0.01/							
HYDROL								
	lydrology Indicato						<b>.</b>	
	dicators (minimum o	of one is requ						ndicators (minimum of two required)
	e Water (A1) Vater Table (A2)		Water-Stai Aquatic Fa		` '			Soil Cracks (B6) e Patterns (B10)
	ation (A3)		True Aquatic Fa	•	,			son Water Table (C2)
	Marks (B1)		Hydrogen 3					Burrows (C8)
	ient Deposits (B2)		Oxidized R		. ,	vina Root		on Visible on Aerial Imagery (C9)
	eposits (B3)		Presence of	•		•	. ,	or Stressed Plants (D1)
	Mat or Crust (B4)		Recent Iro					phic Position (D2)
Iron D	eposits (B5)		Thin Muck	Surface	(C7)		X FAC-Ne	utral Test (D5)
Inunda	ation Visible on Aeri	al Imagery (E	(57) Gauge or V	Nell Data	ı (D9)			
Spars	ely Vegetated Conc	ave Surface	(B8Other (Exp	lain in Re	emarks)			
Field Obs	ervations:							
Surface W	ater Preser Yes	No	X Depth (inch	es):				
Water Tab	le Present? Yes	No	X Depth (inch	es):				
Saturation		No	X Depth (inch	es):		Wetland	d Hydrology Prese	nt? Yes <u>X</u> No
	apillary fringe)							
Describe F	Recorded Data (stre	am gauge, m	onitoring well, aeri	al photos	, previous	s inspectio	ons), if available:	
Remarks:								

Project/Site: Anderson Princeton Development		City/Coun	ty: Princeton		Sampling Date:	7/24/2018
Applicant/Owner: Paul and Marijo Anderson				State: IA	Sampling Point:	U1 (2)
Investigator(s): Wilson/Brockett		Section, T	ownship, Ran	ge: Sec 10, T 79 N, R	5 E	
Landform (hillside, terrace, etc.): Drainageway Terra	ace		Local relief (	concave, convex, none	): Convex	
Slope (%): 2-5% Lat: 41.665576		Long: -	90.360501		Datum: NAD 83	
Soil Map Unit Name Timula				NWI classifi	ication: None	
Are climatic / hydrologic conditions on the site typica	I for this time	of vear?	Yes X N	lo (If no. explain	in Remarks.)	
Are Vegetation, Soil, or Hydrology _		•			,	X No
Are Vegetation, Soil, or Hydrology _				d, explain any answers		
SUMMARY OF FINDINGS – Attach site r						atures, etc.
Hydrophytic Vegetation Present? Yes	No X	Is the	Sampled Ar	ea		
	No X		n a Wetland?		<u>No X</u>	
Wetland Hydrology Present? Yes						
Remarks: VEGETATION – Use scientific names of p	lants.					
	Absolute	Dominant	Indicator			
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test wo		
1 2.				Number of Dominan That Are OBL, FACV		1 (A)
3.				Total Number of Dor	minant	
4				Species Across All S	Strata:	3 (B)
5				Percent of Dominant	•	
Sapling/Shrub Stratum (Plot size:		=Total Cover		That Are OBL, FAC	N, or FAC: 3	3.3% (A/B)
1.	/			Prevalence Index w	vorksheet:	
2.				Total % Cover	of: Mult	iply by:
3.				OBL species	0 x 1 =	0
4				FACW species	95 x 2 =	190
5				-	0 x 3 =	0
Llark Strature (Distaire)		=Total Cover		· · ·	$\frac{40}{50}$ x 4 =	160
<u>Herb Stratum</u> (Plot size:) 1. Solidago gigantea	95	Yes	FACW	_	<u>50</u> x 5 =	250 600 (B)
2. Monarda didyma	50	Yes	UPL	Prevalence In		3.24 (B)
3. Bromus inermis	40	Yes	FACU			0.2 .
4.				Hydrophytic Vegeta	ation Indicators:	
5				1 - Rapid Test fo	or Hydrophytic Veg	etation
6				2 - Dominance		
7				3 - Prevalence I		
8					al Adaptations <sup>1</sup> (Pr rks or on a separat	
9					drophytic Vegetatic	
10	185 =	=Total Cover		<u> </u>		,
Woody Vine Stratum (Plot size:	)			<sup>1</sup> Indicators of hydric be present, unless d	•	
1				Hydrophytic		
2		-Total Caura		Vegetation		~
		=Total Cover		Present? Y	′esNo	<u>^</u>
Remarks: (Include photo numbers here or on a sep	oarate sheet.)	)				

Sampling Point:	U1 (2)

<b>Profile Desc</b> Depth	Matrix		Redo	x Feature	es			
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-24	10YR 4/4	100					Loamy/Clayey	
		<u> </u>						
		epletion, RM	=Reduced Matrix,	MS=Mas	ked Sand	l Grains.		Pore Lining, M=Matrix.
ydric Soil I			Quarter Olar					r Problematic Hydric Soils <sup>3</sup> :
Histosol	. ,		Sandy Gley		x (54)			airie Redox (A16)
	oipedon (A2)		Sandy Red				· · ·	ganese Masses (F12)
Black Hi	( )		Stripped M		)			nt Material (F21)
	n Sulfide (A4)		Dark Surfa	· · /				llow Dark Surface (TF12)
	Layers (A5)		Loamy Mu					plain in Remarks)
	ick (A10) h Bolow Dark Surf	000 (111)	Loamy Gle					
	Below Dark Surfa	ace (ATT)	Depleted M Redox Dar	•	·		<sup>3</sup> Indiactors of	hydrophytic vegetation and
	ark Surface (A12) lucky Mineral (S1)		Depleted D		` '			ydrology must be present,
	icky Peat or Peat (		Redox Dep					sturbed or problematic.
	_ayer (if observed		·		· · /			
	,	-,-						
Type: Depth (incl	nes):						Hydric Soil Prese	ent? Yes <u>No X</u>
Type: Depth (incl Remarks:							Hydric Soil Prese	ent? Yes <u>No X</u>
Type: Depth (incl temarks: YDROLO	GY						Hydric Soil Prese	ent? Yes <u>No X</u>
Type: Depth (incl temarks: YDROLO Vetland Hyd	GY drology Indicator		ired: check all that	apply)				
Type: Depth (incl emarks: YDROLO /etland Hyo rimary Indic	GY drology Indicator ators (minimum o		ired; check all that Water-Staj		res (B9)		Secondary Inc	dicators (minimum of two required
Type: Depth (incl emarks: //DROLO /etland Hyo rimary Indic Surface	GY drology Indicator cators (minimum o Water (A1)		ired; check all that Water-Stai Aquatic Fa	ned Leav	• •		Secondary Inc	dicators (minimum of two required Soil Cracks (B6)
Type: Depth (incl emarks: //DROLO /etland Hyo rimary Indic Surface	GY drology Indicator ators (minimum o Water (A1) ter Table (A2)		Water-Stai	ned Leav una (B13	)		<u>Secondary Inc</u> Surface S	<u>dicators (minimum of two required</u> Soil Cracks (B6) Patterns (B10)
Type: Depth (incl emarks: YDROLO /etland Hyo rimary Indic Surface High Wa Saturatio	GY drology Indicator ators (minimum o Water (A1) ter Table (A2)		Water-Stai	ned Leav una (B13 ic Plants	) (B14)		Secondary Ind Surface S Drainage Dry-Seas	dicators (minimum of two required Soil Cracks (B6)
Type: Depth (incl emarks: YDROLO /etland Hyo rimary Indic Surface High Wa Saturatic Water M	<b>GY</b> drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3)		Water-Stain Aquatic Fa True Aquat	ned Leav una (B13 ic Plants Sulfide O	) (B14) dor (C1)	ving Roots	Secondary Ind Surface S Drainage Dry-Seas Crayfish B	<u>dicators (minimum of two required</u> Soil Cracks (B6) Patterns (B10) on Water Table (C2)
Type: Depth (incl emarks: YDROLO /etland Hyo rimary Indic Surface  High Wa Saturatic  Water M Sedimer	<b>GY</b> drology Indicator eators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1)		Water-Stain Aquatic Fa True Aquat Hydrogen S	ned Leav una (B13 ic Plants Sulfide O hizosphe	) (B14) dor (C1) eres on Li	-	Secondary Ind Surface S Drainage Dry-Seas Crayfish E s (C3) Saturation	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
Type: Depth (incl Remarks: YDROLO Vetland Hyd trimary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep	<b>GY</b> drology Indicator eators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) tt Deposits (B2)		Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce	) (B14) dor (C1) eres on Li <sup>r</sup> ed Iron (C	4)	Secondary Ind Surface S Drainage Dry-Seas Crayfish F s (C3) Saturation Stunted o	dicators (minimum of two required Goil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
Type: Depth (incl Remarks: YDROLO Yetland Hyd Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma	<b>GY</b> drology Indicator eators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) at Deposits (B2) posits (B3)		Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce	(B14) dor (C1) eres on Lir ed Iron (C	4)	Secondary Inc Surface S Drainage Dry-Seas Crayfish E S (C3) Saturation Stunted o Stunted o Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1)
Type: Depth (incl emarks: YDROLO /etland Hyd rimary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic	GY drology Indicator cators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) th Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aeria	<u>f one is requ</u> I Imagery (B	Water-Stai Aquatic Fa True Aquati Hydrogen S Oxidized R Presence c Recent Iron Thin Muck 7) Gauge or V	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce n Reducti Surface (	) (B14) dor (C1) eres on Liv ed Iron (C fon in Tille (C7)	4)	Secondary Inc Surface S Drainage Dry-Seas Crayfish E S (C3) Saturation Stunted o Stunted o Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
Type: Depth (incl emarks: YDROLO /etland Hyd rimary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic	GY drology Indicator cators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) nt Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5)	<u>f one is requ</u> I Imagery (B	Water-Stai Aquatic Fa True Aquati Hydrogen S Oxidized R Presence c Recent Iron Thin Muck 7) Gauge or V	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data	(B14) dor (C1) eres on Lir ed Iron (C fon in Tille (C7) (D9)	4)	Secondary Inc Surface S Drainage Dry-Seas Crayfish E S (C3) Saturation Stunted o Stunted o Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
Type: Depth (incl emarks: YDROLO /etland Hyo rimary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely ield Obser	GY drology Indicator eators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) posits (B3) at or Crust (B4) posits (B5) on Visible on Aeria v Vegetated Conca vations:	<u>f one is requ</u> al Imagery (B ave Surface (	Water-Stai Aquatic Fa True Aquati Hydrogen 3 Oxidized R Presence of Recent Iron Thin Muck 7) Gauge or V (BE Other (Exp	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data lain in Re	(B14) dor (C1) eres on Lir ed Iron (C fon in Tille (C7) (D9)	4)	Secondary Inc Surface S Drainage Dry-Seas Crayfish E S (C3) Saturation Stunted o Stunted o Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
Type: Depth (incl emarks: YDROLO Vetland Hyo rimary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely ield Obser	GY drology Indicator eators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) at Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aeria v Vegetated Conca vations: er Preser Yes	al Imagery (B ave Surface ( NoNo	Water-Stai Aquatic Fa True Aquati Hydrogen 3 Oxidized R Presence 0 Recent Iron Thin Muck 7) Gauge or V (BE Other (Exp	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data lain in Re	(B14) dor (C1) eres on Lir ed Iron (C fon in Tille (C7) (D9)	4)	Secondary Inc Surface S Drainage Dry-Seas Crayfish E S (C3) Saturation Stunted o Stunted o Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
Type: Depth (incl Remarks: YDROLO Vetland Hyd trimary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely ield Observ Vauface Water	GY drology Indicator cators (minimum of Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) arks (B3) art or Crust (B4) oosits (B5) on Visible on Aeria v Vegetated Conca vations: er Preser Yes Present? Yes	al Imagery (B ave Surface ( NoNo	Water-Stail     Aquatic Fa     True Aquatic Fa     True Aquatic Fa     Oxidized R     Presence of     Recent Iron     Thin Muck T     Gauge or V (B& Other (Exp     X Depth (incher     X Depth (incher     X Depth (incher     X	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reducti Surface ( Vell Data lain in Re es): es):	(B14) dor (C1) eres on Lir ed Iron (C fon in Tille (C7) (D9)	4) ed Soils (C	Secondary Ind Surface S Drainage Dry-Seas Crayfish E S (C3) Saturation Stunted o Geomorp FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Type: Depth (incl Remarks: YDROLO Vetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely Surface Water Vater Table Gaturation Ph	GY drology Indicator cators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) th Deposits (B2) oosits (B3) at or Crust (B4) oosits (B5) on Visible on Aeria v Vegetated Conca vations: er Preser Yes Present? Yes resent? Yes	al Imagery (B ave Surface ( NoNo	Water-Stai Aquatic Fa True Aquati Hydrogen 3 Oxidized R Presence 0 Recent Iron Thin Muck 7) Gauge or V (BE Other (Exp	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reducti Surface ( Vell Data lain in Re es): es):	(B14) dor (C1) eres on Lir ed Iron (C fon in Tille (C7) (D9)	4) ed Soils (C	Secondary Inc Surface S Drainage Dry-Seas Crayfish E S (C3) Saturation Stunted o Stunted o Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Type: Depth (incl Remarks: YDROLO Vetland Hyo Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely Surface Water Vater Table Saturation Pr includes cap	GY drology Indicator cators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) arks (B3) art or Crust (B4) oosits (B5) on Visible on Aeria vegetated Conca vations: er Preser Yes Present? Yes resent? Yes illary fringe)	al Imagery (B ave Surface ( No No No	Water-Stail     Aquatic Fa     True Aquatic Fa     Hydrogen S     Oxidized R     Presence o     Recent Iron     Thin Muck T     Gauge or V     (B& Other (Exp     X Depth (inche     X Depth (inche	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce Neducti Surface ( Vell Data lain in Re es):  es): 	) (B14) dor (C1) eres on Li end Iron (C on in Tille (C7) (D9) emarks)	4) ed Soils (C	Secondary Inc Surface S Drainage Dry-Seas Crayfish E Stunted o Stunted o Geomorp FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Type: Depth (incl Remarks: YDROLO Vetland Hyd Primary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely ield Obser Surface Wate Vater Table Saturation Pr ncludes cap	GY drology Indicator cators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) arks (B3) art or Crust (B4) oosits (B5) on Visible on Aeria vegetated Conca vations: er Preser Yes Present? Yes resent? Yes illary fringe)	al Imagery (B ave Surface ( No No No	Water-Stail     Aquatic Fa     True Aquatic Fa     True Aquatic Fa     Oxidized R     Presence of     Recent Iron     Thin Muck T     Gauge or V (B& Other (Exp     X Depth (incher     X Depth (incher     X Depth (incher     X	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce Neducti Surface ( Vell Data lain in Re es):  es): 	) (B14) dor (C1) eres on Li end Iron (C on in Tille (C7) (D9) emarks)	4) ed Soils (C	Secondary Inc Surface S Drainage Dry-Seas Crayfish E Stunted o Stunted o Geomorp FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Type: Depth (incl emarks: YDROLO Vetland Hyd rimary Indic Surface High Wa Saturatio Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatio Sparsely ield Obser varface Wate Vater Table aturation Pi ncludes cap	GY drology Indicator cators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) arks (B3) art or Crust (B4) oosits (B5) on Visible on Aeria vegetated Conca vations: er Preser Yes Present? Yes resent? Yes illary fringe)	al Imagery (B ave Surface ( No No No	Water-Stail     Aquatic Fa     True Aquatic Fa     Hydrogen S     Oxidized R     Presence o     Recent Iron     Thin Muck T     Gauge or V     (B& Other (Exp     X Depth (inche     X Depth (inche	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce Neducti Surface ( Vell Data lain in Re es):  es): 	) (B14) dor (C1) eres on Li end Iron (C on in Tille (C7) (D9) emarks)	4) ed Soils (C	Secondary Inc Surface S Drainage Dry-Seas Crayfish E Stunted o Stunted o Geomorp FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Type: Depth (incl emarks: //DROLO /etland Hyd rimary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Algal Ma Iron Dep Inundatic Sparsely ield Obser urface Wate /ater Table aturation Pr ncludes cap escribe Rec	GY drology Indicator cators (minimum o Water (A1) ter Table (A2) on (A3) arks (B1) arks (B1) arks (B3) art or Crust (B4) oosits (B5) on Visible on Aeria vegetated Conca vations: er Preser Yes Present? Yes resent? Yes illary fringe)	al Imagery (B ave Surface ( No No No	Water-Stail     Aquatic Fa     True Aquatic Fa     Hydrogen S     Oxidized R     Presence o     Recent Iron     Thin Muck T     Gauge or V     (B& Other (Exp     X Depth (inche     X Depth (inche	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce Neducti Surface ( Vell Data lain in Re es):  es): 	) (B14) dor (C1) eres on Li end Iron (C on in Tille (C7) (D9) emarks)	4) ed Soils (C	Secondary Inc Surface S Drainage Dry-Seas Crayfish E Stunted o Stunted o Geomorp FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)

Project/Site: Anderson Princeton Development		City/0	County: Princeton		Sampling Date:	7/24/2018
Applicant/Owner: Paul and Marijo Anderson				State: IA	Sampling Point:	W2 (3)
Investigator(s): Wilson/Brockett		Section	on, Township, Rar	nge: Sec 10, T 79 N, R	5 E	
Landform (hillside, terrace, etc.): Drainageway Swale	e		Local relief (	concave, convex, none	): Concave	
Slope (%): 0-2% Lat: 41.665147		Lor	ng: -90.360526		Datum: NAD 83	
Soil Map Unit Name Timula				NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical	for this time	e of year?	Yes X N	No (If no, explain	in Remarks.)	
Are Vegetation, Soil, or Hydrology	signifi	cantly distu	urbed? Are "No	rmal Circumstances" pr	esent? Yes	X No
Are Vegetation, Soil, or Hydrology				ed, explain any answer		
SUMMARY OF FINDINGS – Attach site m				ocations, transect	s, important fe	atures, etc.
Hydrophytic Vegetation Present? Yes X	No	ls	s the Sampled Ar	ea		
Hydric Soil Present? Yes X	No		vithin a Wetland?	Yes X	No	
Wetland Hydrology Present? Yes X	No					
Remarks:						
VEGETATION – Use scientific names of pla	ants.					
	Absolute	Domina	ant Indicator			]
Tree Stratum (Plot size:)	% Cover	Species	s? Status	Dominance Test w	orksheet:	
1 2.				Number of Dominan	•	3 (A)
2				That Are OBL, FAC		3 (A)
1				Total Number of Do Species Across All S		3 (B)
5.				Percent of Dominan		(=)
		=Total Co	ver	That Are OBL, FAC	•	00.0% (A/B)
Sapling/Shrub Stratum (Plot size:	)					
1. Salix nigra	60	Yes	OBL	Prevalence Index v		
2				Total % Cover		tiply by:
3		·		· · ·	<u>60</u> x 1 =	60 330
4 5		- <u></u>		FACW species	$\frac{103}{0}$ x 3 =	
o	60	=Total Co	ver	· · · · ·	$\frac{1}{20}$ x 4 =	
Herb Stratum (Plot size: )		•		UPL species	0 x 5 =	0
1. Phalaris arundinacea	95	Yes	FACW	Column Totals:	245 (A)	470 (B)
2. Carex vulpinoidea	70	Yes	FACW	Prevalence Ir	idex = B/A =	1.92
3. Asclepias syriaca	20	No	FACU			
4				Hydrophytic Veget		
5.					or Hydrophytic Veg	jetation
6 7				X 2 - Dominance X 3 - Prevalence		
8.		·			al Adaptations <sup>1</sup> (Pr	ovide supportin
9.					rks or on a separat	
10.		·		Problematic Hy	drophytic Vegetatio	on <sup>1</sup> (Explain)
	185	=Total Co	ver	<sup>1</sup> Indicators of hydric	soil and wetland h	ydrology must
Woody Vine Stratum (Plot size:)				be present, unless d	listurbed or probler	natic.
1				Hydrophytic		
2		- <u></u>		Vegetation		
	-	=Total Co	ver	Present?	(es <u>X</u> No	
Remarks: (Include photo numbers here or on a sepa	arate sheet.	.)				

Sampling Point:	W2 (	3)	
		- /	

Depth	scription: (Descril Matrix		-	ox Featur	es			
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-4	10YR 3/2	100					Loamy/Clayey	
4-10	10YR 3/2	90	7.5YR 4/6	10	С	М	Loamy/Clayey	Prominent redox concentrations
10-24	10YR 4/4	100					Loamy/Clayey	
	Concentration, D=D	epletion, RM	I=Reduced Matrix,	MS=Mas	ked Sanc	Grains.		Pore Lining, M=Matrix. ■ Problematic Hydric Soils <sup>3</sup> :
Histoso	ol (A1)		Sandy Gle	yed Matri	x (S4)		Coast P	rairie Redox (A16)
Histic E	Epipedon (A2)		Sandy Red	lox (S5)			Iron-Ma	nganese Masses (F12)
Black H	Histic (A3)		Stripped M	atrix (S6)	)		Red Par	ent Material (F21)
Hydrog	gen Sulfide (A4)		Dark Surfa	ce (S7)			Very Sh	allow Dark Surface (TF12)
Stratifie	ed Layers (A5)		Loamy Mu	cky Mine	ral (F1)		Other (E	xplain in Remarks)
2 cm N	luck (A10)		Loamy Gle	yed Matr	ix (F2)		_	
Deplete	ed Below Dark Surf	face (A11)	Depleted N	•			-	
	Dark Surface (A12)		X Redox Dar		. ,			f hydrophytic vegetation and
-	Mucky Mineral (S1		Depleted [					hydrology must be present,
5 cm N	lucky Peat or Peat	(S3)	Redox Dep	pressions	(F8)		unless c	listurbed or problematic.
Type: Depth (in							Hydric Soil Pres	sent? Yes <u>X</u> No
							Hydric Soil Pres	sent? Yes <u>X</u> No
Type: Depth (in	ches):						Hydric Soil Pres	sent? Yes <u>X</u> No
Type: Depth (in Remarks: YDROL	ches):						Hydric Soil Pres	sent? Yes <u>X</u> No
Type: Depth (in Remarks: YDROL	ogy	rs:	uired; check all that	apply)				eent? Yes X No
Type: Depth (in emarks: YDROLO /etland H rimary Ind Surface	OGY ydrology Indicator licators (minimum c e Water (A1)	rs:	Water-Stai	ned Leav	` '		<u>Secondary lı</u> Surface	ndicators (minimum of two required Soil Cracks (B6)
Type: Depth (in emarks: YDROLO /etland H rimary Ind Surface  High W	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2)	rs:	Water-Stai	ned Leav una (B13	5)		<u>Secondary li</u> Surface Drainag	<u>ndicators (minimum of two required</u> Soil Cracks (B6) e Patterns (B10)
Type: Depth (in emarks: YDROL( /etland H rimary Ind Surface High W Satura	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3)	rs:	Water-Stai Aquatic Fa True Aqua	ned Leav una (B13 tic Plants	6) (B14)		<u>Secondary lı</u> Surface Drainag Dry-Sea	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2)
Type: Depth (in emarks: YDROL( /etland H; rimary Ind Surface High W Satura Water	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1)	rs:	Water-Stai Aquatic Fa True Aqua Hydrogen	ned Leav una (B13 tic Plants Sulfide O	6) (B14) dor (C1)		Secondary II Surface Drainag Dry-Sea Crayfish	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8)
Type: Depth (in emarks: YDROLO Vetland H rimary Ind Surface High W Satura Water Sedime	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)	rs:	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F	ned Leav una (B13 tic Plants Sulfide O thizosphe	) (B14) dor (C1) eres on Li	-	Secondary II Surface Drainag Dry-Sea Crayfish s (C3) Saturati	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9)
Type: Depth (in emarks: YDROLO Vetland H rimary Ind Surface  Surface  Satura  Satura  Sedime  Drift De	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	rs:	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce	6) (B14) dor (C1) eres on Li ed Iron (C	(4)	Secondary II Surface Drainag Dry-Sea Crayfish s (C3) Stunted	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Type: Depth (in emarks: YDROLO Vetland H Surface Surface High W Satura Satura Sedime Drift De Algal M	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) fat or Crust (B4)	rs:	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce n Reducti	(B14) dor (C1) eres on Li ed Iron (C	(4)	Secondary In Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Type: Depth (in emarks: YDROLO /etland H rimary Ind Surface Unife De Sedime Algal M Iron De	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	rs: of one is requ	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce n Reducti Surface	(B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7)	(4)	Secondary In Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Type: Depth (in emarks: YDROLO /etland H rimary Ind Surface High W Satura Sedime Drift De Algal M Iron De Inunda	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) /at or Crust (B4) eposits (B5)	rs: If one is requ	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck 37) Gauge or V	ned Leav una (B13 tic Plants Sulfide O chizosphe of Reduce n Reducti Surface ( Well Data	(B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9)	(4)	Secondary In Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Type: Depth (in emarks: YDROL( Vetland H; rimary Ind Surface High W Satura Water Sedime Drift De Algal M Iron De Inunda Sparse	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) /at or Crust (B4) eposits (B5) tion Visible on Aeria	rs: If one is requ	Water-Stail Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck 37) Gauge or V	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce n Reducti Surface ( Well Data	(B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9)	(4)	Secondary In Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Type: Depth (in emarks: YDROLO Vetland H Surface Surface Unift De Sedime Sedime Drift De Algal M Iron De Inunda Sparse ield Obse	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) /at or Crust (B4) eposits (B5) tion Visible on Aeria	rs: of one is requ al Imagery (E ave Surface	Water-Stail Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck 37) Gauge or V	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce n Reducti Surface I Well Data lain in Re	(B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9)	(4)	Secondary In Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Type: Depth (in emarks: YDROLO Vetland H rimary Ind Surface Urifator Sedime Sedime Sedime Drift De Algal M Iron De Inunda Sparse urface Wa	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conce ervations:	rs: of one is requ al Imagery (E ave Surface	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck 37) Gauge or V (B& Other (Exp	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce n Reducti Surface I Vell Data lain in Re	(B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9)	(4)	Secondary In Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Type: Depth (in Remarks: YDROLO Vetland H Primary Ind Surface High W Satura Water I Sedime Algal M Iron De Inunda Sparse Surface Wa Vater Table Saturation	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conce ervations: ater Preser Yes e Present? Yes	rs: of one is requ al Imagery (E ave Surface No No	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck 37) Gauge or V (B& Other (Exp	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce n Reducti Surface ( Nell Data lain in Re es): es):	(B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9)	(4) ed Soils ((	Secondary In Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Type: Depth (in Remarks: YDROLO Vetland H Primary Ind Surface High W Satura Water I Sedime Drift De Algal M Iron De Inunda Sparse Surface Wa Vater Tabl Saturation I ncludes ca	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conce ervations: ater Preser Yes e Present? Yes present? Yes apillary fringe)	rs: of one is required al Imagery (E ave Surface No No No	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck 37) Gauge or V (B& Other (Exp X Depth (inch X Depth (inch	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce n Reducti Surface ( Well Data Iain in Re es): es): es):	(B14) (B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9) emarks)	(4) ed Soils (0 Wetlan	Secondary II Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor X FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Type: Depth (in emarks: YDROLO Vetland H Trimary Ind Surface High W Satura Water I Sedime Drift De Algal M Iron De Inunda Sparse ield Obse Surface Wa Vater Table auface Wa	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conce ervations: ater Preser Yes e Present? Yes	rs: of one is required al Imagery (E ave Surface No No No	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck 37) Gauge or V (B& Other (Exp X Depth (inch X Depth (inch	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce n Reducti Surface ( Well Data Iain in Re es): es): es):	(B14) (B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9) emarks)	(4) ed Soils (0 Wetlan	Secondary II Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor X FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Type: Depth (in emarks: YDROLO Vetland H rimary Ind Surface High W Satura Water I Sedime Drift De Algal M Iron De Inunda Sparse ield Obse urface Wa Vater Tabl aturation I ncludes ca	OGY ydrology Indicator licators (minimum c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conce ervations: ater Preser Yes e Present? Yes present? Yes apillary fringe)	rs: of one is required al Imagery (E ave Surface No No No	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck 37) Gauge or V (B& Other (Exp X Depth (inch X Depth (inch	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce n Reducti Surface ( Well Data Iain in Re es): es): es):	(B14) (B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9) emarks)	(4) ed Soils (0 Wetlan	Secondary II Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor X FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

Project/Site: Anderson Princeton Development		City/Cour	ty: Princeton		Sampling Date:	7/24/2018
Applicant/Owner: Paul and Marijo Anderson				State: IA	Sampling Point:	U2 (4)
Investigator(s): Wilson/Brockett		Section, 1	ownship, Rar	nge: Sec 10, T 79 N, R	5 E	
Landform (hillside, terrace, etc.): Terrace of swale			Local relief (	concave, convex, none	): Convex	
Slope (%): 2-5% Lat: 41.665131		Long: -	90.360466		Datum: NAD 83	
Soil Map Unit Name Dockery				NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical	I for this time	of year?	Yes X N	No (If no, explain	in Remarks.)	
Are Vegetation, Soil, or Hydrology _		•			,	X No
Are Vegetation, Soil, or Hydrology _				ed, explain any answers		
SUMMARY OF FINDINGS – Attach site r						atures, etc.
Hydrophytic Vegetation Present? Yes	No X	Is the	e Sampled Ar	ea		
	No X		n a Wetland?		<u>No X</u>	
Wetland Hydrology Present? Yes						
Remarks: VEGETATION – Use scientific names of pl	ants.					
	Absolute	Dominant	Indicator			
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test we		
2.				Number of Dominan That Are OBL, FAC		1 (A)
3.				Total Number of Dor	minant	
4.				Species Across All S	Strata:	3 (B)
5				Percent of Dominant	•	
Sopling/Shrub Stratum (Plot size: 15		=Total Cover		That Are OBL, FAC	N, or FAC: 33	<u>3.3%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 15	_)			Prevalence Index w	vorksheet:	
2.				Total % Cover		iply by:
3.				OBL species	0 x 1 =	0
4.				FACW species	95 x 2 =	190
5				FAC species	0 x 3 =	0
	:	=Total Cover		· · ·	90 x 4 =	360
Herb Stratum (Plot size: 5 )				UPL species	0 x 5 =	0
1. Solidago gigantea	95	Yes	FACW		185 (A)	550 (B)
2. Monarda fistulosa	50	Yes	FACU	Prevalence In	dex = B/A =	2.97
3. Bromus inermis 4.	40	Yes	FACU	Hydrophytic Vegeta	ation Indicators:	
5.				, , , ,	or Hydrophytic Veg	etation
6.				2 - Dominance		otation
7.				3 - Prevalence I		
8.				4 - Morphologica	al Adaptations <sup>1</sup> (Pr	ovide supportin
9.				data in Rema	rks or on a separat	e sheet)
10				Problematic Hyd	drophytic Vegetatio	n <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30 )	185 =	=Total Cover		<sup>1</sup> Indicators of hydric be present, unless d	•	
1				Hydrophytic		
2				Vegetation		X
		=Total Cover		Present? Y	′esNo	X
Remarks: (Include photo numbers here or on a sep	oarate sheet.)	)				

Sampling Point:	U2 (4	)

Profile Des Depth	Matrix		Redo	x Feature	es			
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-24	10YR 4/4	100					Loamy/Clayey	
Type: C=0	Concentration, D=D	epletion, RM	=Reduced Matrix,	MS=Mas	ked Sand	l Grains.	<sup>2</sup> Location: PL=F	Pore Lining, M=Matrix.
lydric Soi	I Indicators:						Indicators for	r Problematic Hydric Soils <sup>3</sup> :
Histoso	ol (A1)		Sandy Gle	ed Matri	x (S4)		Coast Pra	airie Redox (A16)
Histic E	Epipedon (A2)		Sandy Red	ox (S5)			Iron-Man	ganese Masses (F12)
Black H	Histic (A3)		Stripped M	atrix (S6)	)		Red Pare	nt Material (F21)
Hydrog	gen Sulfide (A4)		Dark Surfa	ce (S7)			Very Sha	llow Dark Surface (TF12)
Stratifi	ed Layers (A5)		Loamy Mue	cky Miner	ral (F1)		Other (Ex	plain in Remarks)
2 cm N	luck (A10)		Loamy Gle	yed Matr	ix (F2)		-	
Deplet	ed Below Dark Surf	ace (A11)	Depleted N	latrix (F3	)			
Thick [	Dark Surface (A12)		Redox Dar	k Surface	∋ (F6)		<sup>3</sup> Indicators of	hydrophytic vegetation and
-	Mucky Mineral (S1)		Depleted D				wetland h	ydrology must be present,
5 cm N	lucky Peat or Peat	(S3)	Redox Dep	ressions	(F8)		unless dis	sturbed or problematic.
Type: Depth (in	iches):		_				Hydric Soil Prese	ent? Yes <u>No X</u>
Depth (in Remarks:	nches): rrs present.						Hydric Soil Prese	ent? Yes <u>No X</u>
Depth (in emarks: lo indicato	rs present.						Hydric Soil Prese	ent? Yes <u>No X</u>
Depth (in emarks: lo indicato YDROL	OGY ydrology Indicator							
Depth (in emarks: lo indicato YDROL Vetland H rimary Inc	OGY ydrology Indicator						Secondary Inc	dicators (minimum of two required
Depth (in emarks: o indicato YDROL /etland H rimary Inc Surfac	OGY ydrology Indicator licators (minimum o e Water (A1)		Water-Stai	ned Leav	• •		<u>Secondary Inc</u> Surface S	dicators (minimum of two required Soil Cracks (B6)
Depth (in emarks: o indicato YDROL( YDROL( /etland H rimary Inc Surfac High W	ors present. OGY ydrology Indicator licators (minimum o e Water (A1) /ater Table (A2)		Water-Stai	ned Leav una (B13	5)		Secondary Ind Surface S	<u>dicators (minimum of two required</u> Soil Cracks (B6) Patterns (B10)
Pepth (in emarks: o indicato yDROL Vetland H frimary Inc Surfac Surfac High W Satura	OGY ydrology Indicator licators (minimum o e Water (A1) /ater Table (A2) tion (A3)		Water-Stain Aquatic Fa True Aquat	ned Leav una (B13 ic Plants	6) (B14)		Secondary Ind Surface S Drainage Dry-Seas	<u>dicators (minimum of two required</u> Soil Cracks (B6) Patterns (B10) on Water Table (C2)
Depth (in emarks: o indicato YDROL /etland H rimary Inc Surfac High W Satura Water	ors present. OGY ydrology Indicator dicators (minimum o e Water (A1) /ater Table (A2) tion (A3) Marks (B1)		Water-Stain Aquatic Fa True Aquat Hydrogen S	ned Leav una (B13 ic Plants Sulfide O	6) (B14) dor (C1)	ving Roots	Secondary Ind Surface S Drainage Dry-Seas Crayfish B	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
Depth (in emarks: lo indicato YDROL Vetland H rimary Inc Surface High W Satura Water Sedime	ors present. OGY ydrology Indicator dicators (minimum o e Water (A1) /ater Table (A2) tion (A3) Marks (B1) ent Deposits (B2)		Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R	ned Leav una (B13 ic Plants Sulfide O hizosphe	(B14) dor (C1) eres on Liv	0	Secondary Ind Surface S Drainage Dry-Seas Crayfish R (C3) Saturation	dicators (minimum of two required Goil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
Depth (in emarks: o indicato YDROL /etland H rimary Inc Surfac Surfac High W Satura Water Sedime Drift Do	ors present. OGY ydrology Indicator dicators (minimum o e Water (A1) vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)		Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce	6) (B14) dor (C1) eres on Liv ed Iron (C	4)	Secondary Ind Surface S Drainage Dry-Seas Crayfish R (C3) Saturation Stunted o	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Depth (in Remarks: lo indicato YDROL Vetland H Primary Inc Surfac Surfac High W Satura Water Sedime Drift De Algal M	ors present. OGY ydrology Indicator dicators (minimum o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4)		Water-Stai Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iron	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce	i) (B14) dor (C1) eres on Liv ed Iron (C ion in Tille	4)	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 6) Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2)
Depth (in Remarks: lo indicato YDROL Vetland H Primary Inc Surfac High W Satura Water Sedime Drift De Algal M Iron De	ors present. OGY ydrology Indicator dicators (minimum o e Water (A1) vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3)	<u>f one is requ</u>	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o Recent Iron Thin Muck	ned Leav una (B13 iic Plants Sulfide O hizosphe of Reduce n Reducti Surface (	(B14) dor (C1) eres on Liv ed Iron (C ion in Tille (C7)	4)	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 6) Geomorp	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Depth (in emarks: o indicato YDROL /etland H rimary Inc Surface Unift Do Satura Sedimo Algal M Iron De Inunda	ors present. OGY ydrology Indicator licators (minimum o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5)	<u>f one is requ</u> al Imagery (E	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iron Thin Muck 37) Gauge or V	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9)	4)	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 6) Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2)
Depth (in emarks: lo indicato YDROL Vetland H rimary Inc Surfac Surfac Unita Water Sedima Drift Da Algal M Iron De Inunda Sparse	ors present. OGY ydrology Indicator licators (minimum o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria	<u>f one is requ</u> al Imagery (E	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iron Thin Muck 37) Gauge or V	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9)	4)	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 6) Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2)
Depth (in emarks: lo indicato YDROL Vetland H rimary Inc Surface High W Satura Vater Sedime Drift De Algal M Iron De Inunda Sparse ield Obse	ors present. OGY ydrology Indicator dicators (minimum o e Water (A1) vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) vat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca	<u>f one is requ</u> al Imagery (E ave Surface (	Water-Stai Aquatic Fa True Aquati Hydrogen 3 Oxidized R Presence of Recent Iron Thin Muck 37) Gauge or V (BE Other (Exp	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data lain in Re	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9)	4)	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 6) Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2)
Depth (in emarks: lo indicato YDROL( Vetland H high W Satura Water Sedime Drift De Algal M Iron De Inunda Sparse ield Obse	ors present. OGY ydrology Indicator dicators (minimum o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations:	<u>f one is requ</u> al Imagery (E ave Surface ( No	Water-Stai Aquatic Fa True Aquati Hydrogen 3 Oxidized R Presence of Recent Iron Thin Muck 37) Gauge or V (BE Other (Exp	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data lain in Re	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9)	4)	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 6) Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2)
Depth (in Remarks: lo indicato YDROL Vetland H Primary Inc Surfac Usatura Satura Vater Satura Drift Do Algal M Iron De Inunda Sparse Surface Wa Vater Tabl	OGY ydrology Indicator licators (minimum o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations: ater Preser Yes e Present? Yes	al Imagery (E ave Surface ( No No	Water-Stai Aquatic Fa True Aquati Hydrogen 3 Oxidized R Presence 0 Recent Iron Thin Muck 37) Gauge or V (B8_Other (Exp	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reducti Surface ( Vell Data lain in Re es): es):	(B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (D9)	:4) ed Soils (C	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 6) Geomorp	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Depth (in Remarks: lo indicato YDROL Vetland H Primary Inc Surfac User Surfac User Satura Drift De Algal M Iron De Inunda Sparse Surface Wa Surface Wa Surface Wa Surface Wa Surface Wa	OGY ydrology Indicator licators (minimum o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations: ater Preser Yes e Present? Yes present? Yes apillary fringe)	al Imagery (E ave Surface ( No No No No	Water-Stai Aquatic Fa True Aquati Hydrogen S Oxidized R Presence o Recent Iron Thin Muck 37) Gauge or V (B& Other (Exp X Depth (inche X Depth (inche	ned Leav una (B13 iic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data lain in Re es): es): es):	(B14) (B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (C9) emarks)	4) ed Soils (C	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 6) Geomorp FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Depth (in Remarks: Io indicato YDROL Vetland H Primary Inc Surfac User Surfac User Satura Orift De Algal M Iron De Inunda Sparse Surface Wa Staturation includes ca	OGY ydrology Indicator licators (minimum o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations: ater Preser Yes e Present? Yes	al Imagery (E ave Surface ( No No No No	Water-Stai Aquatic Fa True Aquati Hydrogen S Oxidized R Presence o Recent Iron Thin Muck 37) Gauge or V (B& Other (Exp X Depth (inche X Depth (inche	ned Leav una (B13 iic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data lain in Re es): es): es):	(B14) (B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (C9) emarks)	4) ed Soils (C	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 6) Geomorp FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Depth (in Remarks: lo indicato YDROL Vetland H Primary Inc Surface High W Satura Water Sedime Algal M Iron De Inunda Sparse Surface Wa Vater Tabl Saturation ncludes ca Describe R	OGY ydrology Indicator licators (minimum o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations: ater Preser Yes e Present? Yes present? Yes apillary fringe)	al Imagery (E ave Surface ( No No No No	Water-Stai Aquatic Fa True Aquati Hydrogen S Oxidized R Presence o Recent Iron Thin Muck 37) Gauge or V (B& Other (Exp X Depth (inche X Depth (inche	ned Leav una (B13 iic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data lain in Re es): es): es):	(B14) (B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (C9) emarks)	4) ed Soils (C	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 6) Geomorp FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Depth (in emarks: lo indicato YDROL Vetland H rimary Inc Surface High W Satura Water Sedime Algal M Iron De Inunda Sparse ield Obse vater Tabl aturation ncludes ca bescribe R	OGY ydrology Indicator licators (minimum o e Water (A1) Vater Table (A2) tion (A3) Marks (B1) ent Deposits (B2) eposits (B3) Mat or Crust (B4) eposits (B5) tion Visible on Aeria ely Vegetated Conca ervations: ater Preser Yes e Present? Yes present? Yes apillary fringe)	al Imagery (E ave Surface ( No No No No	Water-Stai Aquatic Fa True Aquati Hydrogen S Oxidized R Presence o Recent Iron Thin Muck 37) Gauge or V (B& Other (Exp X Depth (inche X Depth (inche	ned Leav una (B13 iic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data lain in Re es): es): es):	(B14) (B14) dor (C1) eres on Lived Iron (C ion in Tille (C7) (C9) emarks)	4) ed Soils (C	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 6) Geomorp FAC-Neu	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)

Project/Site: Anderson Princeton Development		City/Coun	ty: Princeton		Sampling Date:	7/25/2018
Applicant/Owner: Paul and Marijo Anderson				State: IA	Sampling Point:	W3 (5)
Investigator(s): Wilson/Brockett		Section, T	ownship, Ra	nge: <u>Sec 10, T 79 N, R</u>	5 E	
Landform (hillside, terrace, etc.): Stream Terrace			Local relief (	(concave, convex, none	): None	
Slope (%): 0-2% Lat: 41.666135		Long: -	90.355915		Datum: NAD 83	
Soil Map Unit Name Fayette				NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typica	al for this time	e of year?	Yes X I	No (If no, explain	in Remarks.)	
Are Vegetation, Soil, or Hydrology	signifi	cantly disturbed	d? Are "No	ormal Circumstances" pr	esent? Yes	X No
Are Vegetation, Soil, or Hydrology				ed, explain any answer		
SUMMARY OF FINDINGS – Attach site				ocations, transect	s, important fe	eatures, etc.
Hydrophytic Vegetation Present? Yes X	No	Is the	e Sampled A	rea		
Hydric Soil Present? Yes X	No	withi	n a Wetland?	? Yes <u>X</u>	No	
Wetland Hydrology Present?   Yes   X	No					
Remarks:						
	Janta					
VEGETATION – Use scientific names of p	Absolute	Dominant	Indicator	1		
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test w	orksheet:	
1. Celtis occidentalis	60	Yes	FAC	Number of Dominan	t Species	
2. Morus alba	30	Yes	FAC	That Are OBL, FAC	N, or FAC:	3 (A)
3				Total Number of Do		
4.				Species Across All S	Strata:	5 (B)
5		-Total Covar		Percent of Dominan		
Sapling/Shrub Stratum (Plot size:	90	=Total Cover		That Are OBL, FAC	/v, of FAC: 6	0.0% (A/B)
1. Lonicera japonica	/ 70	Yes	FACU	Prevalence Index v	vorksheet:	
2.				Total % Cover		iply by:
3.				OBL species	0 x 1 =	0
4.				FACW species	60 x 2 =	120
5				FAC species	90 x 3 =	270
	70	=Total Cover		FACU species	150 x 4 =	600
Herb Stratum (Plot size:)				UPL species	0 x 5 =	0
1. Osmorhiza longistylis	80	Yes	FACU		300 (A)	990 (B)
2. Laportea canadensis	60	Yes	FACW	Prevalence Ir	idex = B/A =	3.30
3				Hydrophytic Veget	ation Indicators:	
5.					or Hydrophytic Veg	etation
6.				X 2 - Dominance		jotation
7.				3 - Prevalence I		
8.				4 - Morphologic	al Adaptations <sup>1</sup> (Pr	ovide supportin
9.				data in Rema	rks or on a separat	te sheet)
10				Problematic Hy	drophytic Vegetatio	on <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:		=Total Cover		<sup>1</sup> Indicators of hydric be present, unless d		
1				Hydrophytic		
2				Vegetation		
		=Total Cover		Present?	′es <u>X</u> No	
Remarks: (Include photo numbers here or on a se	parate sheet.	)				

Sampling Point:	W3 (	5)	
eampining i enna		-	

(inches)         Cotor (moist)         %         Type         LocamyClayey         Remarks           0.4         10YR 4/2         100	Depth	Matrix		Redo	ox Featur	es			
4-10         10YR 4/2         90         10YR 4/6         10         C         M         Learny/Clayey         Prominent redox concentration           10-24         10YR 4/2         100	(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
10-24       10VR 4/2       100       Loamy/Clayey         "Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.       *Location: PL=Pore Lining, M=Matrix, Type/TS 301 Indicators for Problematic Hydric Solis?;         Histos pipedon (A2)       Sandy Gleyed Matrix (S6)       Indicators for Problematic Hydric Solis?;         Histos pipedon (A2)       Sandy Gleyed Matrix (S6)       Coast Praite Reduced (A16)         Stratified Layers (A5)       Loamy Ukey Mineral (F1)       Other (Explain in Remarks)         2 orm Muck (A10)       Dark Surface (S7)       Vary Shalow Dark Surface (TF12)         Depleted Matrix (F2)       Depleted Matrix (F2)       Other (Explain in Remarks)         2 orm Muck (A10)       Loamy Gleyed Matrix (F2)       Indicators of hydrophytic vegetation and wetland hydrology must be present, 5 or muck yeator Peat (S3)       Redox Dark Surface (F7)         Sandy Mucky Mineral (S1)       Depleted Matrix (F2)       Indicators of hydrophytic vegetation and wetland hydrology must be present, 5 or muck yeator Peat (S3)       Redox Depressions (F8)         Pertimery Indicators (Inhinum of one is required; check all that apply)       Secondary Indicators (Inhinum of two require hydrogeness on Living Rear Neat (S1)         Surface Water (A1)       Water-Stained Leaves (B9)       Surface S0I Cracks (B6)         Hydrid Soil Mineral (F1)       Quater Fains (B14)       Dry-Season Water Table (A2)         Surface Water (A1)	0-4	10YR 3/2	100					Loamy/Clayey	
Type:       C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.       *Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils?:       Indicators for Problematic Hydric Soils?:         Histosel (A1)       Sandy Gleyed Matrix (S6)       Icon-Manganese Masses (F12)         Black Histo (A3)       Stripped Matrix (S6)       Icon-Manganese Masses (F12)         Stratified Layers (A5)       Learny Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Learny Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Dark Surface (A12)       Redox Dark Surface (F7)       wetland hydrology must be present, so mMucky Mineral (S1)         S om Mucky Mineral (S1)       Depleted Dark Surface (F7)       unless disturbed or problematic.         Restrictive Layer (If Observed):       Tpe:       Lepsh (inches):       No         Type:       Lepsh (inches):       Hydric Soil Present?       Yes x       No         Remarks:       Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water (A10)       Cracks (B6)         Staturation (A3)       Presence of Reduced Iron (C4)       Staturation Visible on Aerial Imagery (C2)       Saturation (K3)       True Aquatic Plants (B14)       Dry-Season Water Table (A2)       Saturation (C3)       Staturation Visible on Aerial Imagery (C2)       Saturat	4-10	10YR 4/2	90	10YR 4/6	10	С	М	Loamy/Clayey	Prominent redox concentratior
Type:       C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.       *Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soils?:       Indicators for Problematic Hydric Soils?:         Histosel (A1)       Sandy Gleyed Matrix (S6)       Icon-Manganese Masses (F12)         Black Histo (A3)       Stripped Matrix (S6)       Icon-Manganese Masses (F12)         Stratified Layers (A5)       Learny Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Learny Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Dark Surface (A12)       Redox Dark Surface (F7)       wetland hydrology must be present, so mMucky Mineral (S1)         S om Mucky Mineral (S1)       Depleted Dark Surface (F7)       unless disturbed or problematic.         Restrictive Layer (If Observed):       Tpe:       Lepsh (inches):       No         Type:       Lepsh (inches):       Hydric Soil Present?       Yes x       No         Remarks:       Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water (A10)       Cracks (B6)         Staturation (A3)       Presence of Reduced Iron (C4)       Staturation Visible on Aerial Imagery (C2)       Saturation (K3)       True Aquatic Plants (B14)       Dry-Season Water Table (A2)       Saturation (C3)       Staturation Visible on Aerial Imagery (C2)       Saturat	10-24	10YR 4/2	100					Loamv/Clavev	
Hydric Soll Indicators:						_	_		
Hydric Soll Indicators:				A-Roduced Matrix					
Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Priatrie Redox (A16)         Histic Epipedon (A2)       Sandy Redox (S5)       Iron-Manganese Masses (F12)         Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (F21)         Yury Shallow Dark Surface (A10)       Loarny Gleyed Matrix (F3)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loarny Gleyed Matrix (F3)       Other (Explain in Remarks)         2 cm Muck (A10)       Loarny Gleyed Matrix (F3)       Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         3 cm Muck (A10)       Depieted Dark Surface (F6)       Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         3 cm Mucky Peat or Peat (S3)       Redox Depressions (F8)       unless disturbed or problematic.         Restrictive Layer (if observed):       Type:       Hydric Soil Present?       Yes_X       No_         Remarks:       Surface Watr (A1)       Water-Stained Lavers (B9)       Surface Watr (A1)       Drainage Patterns (B10)       Surface Watr A11       Surface Watr A11       Grayfish Burrows (C2)       Surface Watr (A1)       Crayfish B					1013-10185	keu Sanc	d Grains.		
Histic Epipedon (A2)       Sandy Redox (S5)       Iron-Manganese Masses (F12)         Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (F21)         Yery Shallow Dark Surface (A1)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 or Muck (A10)       Loamy Gleyed Matrix (F2)       *         Depleted Bolow Dark Surface (A11)       X       Depleted Dark Surface (F6)       *         S orn Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if observed):       Type:	-			Sandy Gle	ved Matri	x (S4)			
Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (F21)         Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         2 cm Muck (A10)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         2 cm Muck (A10)       X       Depleted Bark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         S cm Mucky Peat or Peat (S1)       Depleted Dark Surface (F7)       unless disturbed or problematic.         Restrictive Layer (if observed):       Type:		. ,			•	x (0 1)			
Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Loamy Mucky Mineral (F2)       Other (Explain in Remarks)         Thick Dark Surface (A11)       Depleted Matrix (F2)       "Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Sandy Mucky Mineral (S1)       Depleted Matrix (F3)       "Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (If observed):       Type:					• •	)			•
Stratified Layers (A5)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       X Depleted Matrix (F2)         Depleted Below Dark Surface (A12)       Redox Dark Surface (F6)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)         S or Mucky Peat or Peat (S3)       Redox Depressions (F8)         Restrictive Layer (if observed):		( )			• •	,			( )
2 cm Muck (A10)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       X Depleted Matrix (F3)         Thick Dark Surface (A12)       Redox Dark Surface (F6)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)         wetland hydrology must be present,       wetland hydrology must be present,         5 cm Mucky Peat or Peat (S3)       Redox Depressions (F8)         Restrictive Layer (If observed):		- ,				ral (F1)			
Depleted Below Dark Surface (A11)       X       Depleted Matrix (F3)       ************************************									. /
Thick Dark Surface (A12)       Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         S or Mucky Peat or Peat (S3)       Redox Depressions (F8)       unless disturbed or problematic.         Restrictive Layer (if observed):	Deple	ted Below Dark Surf	ace (A11)						
Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present, unless disturbed or problematic.         Restrictive Layer (if observed):       Type:			. ,	·	•	,		<sup>3</sup> Indicators o	f hydrophytic vegetation and
Restrictive Layer (if observed):         Type:	Sandy	y Mucky Mineral (S1	)						
Type:	5 cm	Mucky Peat or Peat	(S3)	Redox Dep	pressions	(F8)		unless o	listurbed or problematic.
Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two required)         Surface Water (A1)       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)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C3)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       Sparsely Vegetated Concave Surface (BE       Other (Explain in Remarks)         Field Observations:       Water Table Present?       Yes       No       X         Surface Water Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       X       No         Gincludes capillary fringe)       Describe Record	Depth (i	nches):		_				Hydric Soil Pres	sent? Yes <u>X</u> No
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)       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)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C2)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       Sparsely Vegetated Concave Surface (B£       Other (Explain in Remarks)         Field Observations:       Water Table Present?       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       X       No         Saturation Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       X       No	Depth (i Remarks:							Hydric Soil Pres	sent? Yes <u>X</u> No
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)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         Sparsely Vegetated Concave Surface (B8       Other (Explain in Remarks)         Field Observations:       Surface Water Preser       Yes       No         Saturation Present?       Yes       No       X       Depth (inches):         Saturation Present?       Yes       No       X       Depth (inches):         Cincludes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Remarks:	Depth (i Remarks:	LOGY	rç.					Hydric Soil Pres	sent? Yes <u>X</u> No
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 on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         Sparsely Vegetated Concave Surface (B£       Other (Explain in Remarks)         Field Observations:       Surface Water Preser       Yes       No         X       Depth (inches):       Wetland Hydrology Present?       Yes       X         Saturation Present?       Yes       No       X       Depth (inches):         Gincludes capillary fringe)       Depth (inches):       Wetland Hydrology Present?       Yes       X         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Remarks:       Remarks:	Depth (i Remarks: HYDROL Wetland H	_OGY Hydrology Indicator		uired; check all that	apply)				
Water Marks (B1)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)         Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         Sparsely Vegetated Concave Surface (B8       Other (Explain in Remarks)         Field Observations:       Surface Water Preser       Yes       No         X       Depth (inches):       Wetland Hydrology Present?       Yes       X         Saturation Present?       Yes       No       X       Depth (inches):         Saturation Present?       Yes       No       X       Depth (inches):         Saturation Present?       Yes       No       X       Depth (inches):         Becorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Remarks:	Depth (i Remarks: <b>1YDROL</b> Wetland H Primary In	-OGY Hydrology Indicator Idicators (minimum c				res (B9)		Secondary I	ndicators (minimum of two require
Sediment Deposits (B2)       Oxidized Rhizospheres on Living Roots (C3)       Saturation Visible on Aerial Imagery (C9)         Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       Sparsely Vegetated Concave Surface (BE       Other (Explain in Remarks)         Field Observations:       Surface Water Preser       Yes       No       X       Depth (inches):         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         Cincludes capillary fringe)       Depth (inches):       Remarks:       Wetland Hydrology Present?       Yes       X       No	Depth (i Remarks: HYDROL Wetland H Primary In Surfac	-OGY Hydrology Indicator Idicators (minimum c ce Water (A1)		Water-Stai	ned Leav	• •		<u>Secondary I</u> Surface	ndicators (minimum of two require Soil Cracks (B6)
Drift Deposits (B3)       Presence of Reduced Iron (C4)       Stunted or Stressed Plants (D1)         Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       Sparsely Vegetated Concave Surface (BE       Other (Explain in Remarks)         Field Observations:       Surface Water Preser       Yes       No       X       Depth (inches):         Saturation Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       X       No         Gincludes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Remarks:	Depth (i Remarks: HYDROL Wetland H Primary In Surfac High \	-OGY Hydrology Indicator Idicators (minimum c ce Water (A1) Water Table (A2)		Water-Stai	ned Leav una (B13	5)		<u>Secondary I</u> Surface Drainag	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10)
Algal Mat or Crust (B4)       Recent Iron Reduction in Tilled Soils (C6)       X       Geomorphic Position (D2)         Iron Deposits (B5)       Thin Muck Surface (C7)       X       FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)       Sparsely Vegetated Concave Surface (BE       Other (Explain in Remarks)         Field Observations:       Surface Water Preser       Yes       No       X       Depth (inches):         Water Table Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       X         Saturation Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       X       No         Cincludes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Remarks:	Depth (i Remarks: HYDROL Wetland H Primary In Surfac High \ Satura Water	LOGY Hydrology Indicator dicators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1)		Water-Stai Aquatic Fa True Aqua Hydrogen	ned Leav una (B13 tic Plants Sulfide O	6) (B14) dor (C1)		<u>Secondary I</u> <u>Surface</u> Drainag Dry-Sea Crayfish	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) n Burrows (C8)
Iron Deposits (B5)       Thin Muck Surface (C7)       X FAC-Neutral Test (D5)         Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         Sparsely Vegetated Concave Surface (B8       Other (Explain in Remarks)         Field Observations:       Surface Water Preser         Surface Water Preser       Yes       No         X       Depth (inches):       Wetland Hydrology Present?         Yes       No       X         Saturation Present?       Yes       No         X       Depth (inches):       Wetland Hydrology Present?         Yes       X       No         Cincludes capillary fringe)       Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:         Remarks:       Remarks:	Depth (i Remarks: HYDROL Wetland H Primary In Surfac High \ Satura Water Sedim	LOGY Hydrology Indicator Idicators (minimum co ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2)		Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F	ned Leav una (B13 tic Plants Sulfide O thizosphe	i) (B14) dor (C1) eres on Li	0	Secondary I Surface Drainag Dry-Sea Crayfish s (C3) Saturati	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)       Gauge or Well Data (D9)         Sparsely Vegetated Concave Surface (B8       Other (Explain in Remarks)         Field Observations:       Surface Water Preser       Yes       No       X         Surface Water Preser       Yes       No       X       Depth (inches):	Depth (i Remarks: IYDROL Wetland H Primary In Surfac High \ Satura Satura Sedim Drift D	LOGY Hydrology Indicator Idicators (minimum c ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3)		Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce	6) (B14) dor (C1) eres on Li <sup>r</sup> ed Iron (C	(4)	Secondary I Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Sparsely Vegetated Concave Surface (BEOther (Explain in Remarks)         Field Observations:         Surface Water Preser       Yes         No       X       Depth (inches):         Water Table Present?       Yes       No         X       Depth (inches):	Depth (i Remarks: IYDROL Wetland H Primary In Surfac High \ Satura Satura Vater Sedim Drift E Algal	LOGY Hydrology Indicator Indicators (minimum co ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4)		Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduct	(B14) dor (C1) eres on Lir ed Iron (C	(4)	Secondary I Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Field Observations:         Surface Water Preser       Yes       No       X       Depth (inches):	Depth (i Remarks: IYDROL Wetland H Primary In Surfac High \ Satura Satura Sedim Drift D Algal Iron D	-OGY Hydrology Indicator Idicators (minimum c ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5)	if one is requ	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduct n Reduct Surface	(B14) dor (C1) eres on Lir ed Iron (C ion in Tille (C7)	(4)	Secondary I Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Surface Water Preser       Yes       No       X       Depth (inches):	IVDROL Remarks: IVDROL Wetland H Primary In Surfac High \ Satura Satura Vater Sedim Drift D Algal Iron D Inunda	-OGY Hydrology Indicator Idicators (minimum c ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria	o <u>f one is requ</u> al Imagery (I	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck B7) Gauge or V	ned Leav una (B13 tic Plants Sulfide O chizosphe of Reduce n Reduct Surface Well Data	(B14) dor (C1) eres on Lir ed Iron (C ion in Tille (C7) (D9)	(4)	Secondary I Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
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         (includes capillary fringe)       Depth (inches):       Wetland Hydrology Present?       Yes       X       No         Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:       Remarks:       Kemarks:	IVDROL Remarks: IVDROL Wetland H Primary In Surfac High \ Satura Vater Sedim Drift D Algal Iron D Inunda Spars	-OGY Hydrology Indicator adicators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria sely Vegetated Conce	o <u>f one is requ</u> al Imagery (I	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck B7) Gauge or V	ned Leav una (B13 tic Plants Sulfide O chizosphe of Reduce n Reduct Surface Well Data	(B14) dor (C1) eres on Lir ed Iron (C ion in Tille (C7) (D9)	(4)	Secondary I Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Saturation Present?       Yes       No       X       Depth (inches):       Wetland Hydrology Present?       Yes       X       No         (includes capillary fringe)	Depth (i Remarks: IYDROL Wetland H Primary In Surfac High \ Satura Vater Sedim Drift D Algal Iron D Inunda Spars Field Obs	-OGY Hydrology Indicator Idicators (minimum concerned) ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria sely Vegetated Concerned) servations:	o <u>f one is requ</u> al Imagery (I ave Surface	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence of Recent Iro Thin Muck B7) Gauge or N (B8_Other (Exp	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduct n Reduct Surface Well Data Iain in Re	(B14) dor (C1) eres on Lir ed Iron (C ion in Tille (C7) (D9)	(4)	Secondary I Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks:	Depth (i Remarks: IYDROL Wetland H Primary In Surfac High V Satura Sedim Drift D Algal Iron D Inund Spars Surface W	LOGY Hydrology Indicator Idicators (minimum c ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) nent Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeri- sely Vegetated Conce rervations: /ater Preser Yes	o <u>f one is requ</u> al Imagery (I ave Surface No_	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck B7) Gauge or V (B8 Other (Exp	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduct n Reduct Surface Well Data Jain in Re	(B14) dor (C1) eres on Lir ed Iron (C ion in Tille (C7) (D9)	(4)	Secondary I Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X Geomor	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) i Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Remarks:	Depth (i Remarks: IYDROL Wetland H Primary In Surfac High \ Satura Satura Vater Sedim Drift D Algal Iron D Inunda Spars Field Obs Surface W Water Tab	LOGY Hydrology Indicator Indicators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria sely Vegetated Conce rervations: //ater Preser Yes oble Present? Yes	al Imagery (I ave Surface No No	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck B7) Gauge or V (B8 Other (Exp X Depth (inch X Depth (inch	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduct n Reduct Surface Well Data lain in Re es): es):	(B14) (B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9) emarks)	:4) ed Soils ((	Secondary I Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X FAC-Ne	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) eutral Test (D5)
	Depth (i Remarks: IYDROL Wetland H Primary In Surfac High V Satura Satura Drift D Algal Iron D Inunda Spars Field Obs Surface W Water Tab Saturation	LOGY Hydrology Indicator Indicators (minimum concerned) water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria sely Vegetated Concerne servations: fater Preser Yes on Present? Yes	al Imagery (I ave Surface No No	Water-Stai Aquatic Fa True Aqua Hydrogen Oxidized F Presence o Recent Iro Thin Muck B7) Gauge or V (B8 Other (Exp X Depth (inch X Depth (inch	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduct n Reduct Surface Well Data lain in Re es): es):	(B14) (B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9) emarks)	:4) ed Soils ((	Secondary I Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X FAC-Ne	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) eutral Test (D5)
	Depth (i Remarks: <b>IYDROL</b> Wetland H Primary In Surfac High V Satura Satura Drift D Algal Iron D Inunda Spars <b>Field Obs</b> Surface W Water Tab Saturation (includes of	-OGY Hydrology Indicator Indicators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria sely Vegetated Conce servations: //ater Preser Yes oble Present? Yes n Present? Yes capillary fringe)	al Imagery (I ave Surface No No	Water-Stai Aquatic Fa True Aqua Oxidized F Presence o Recent Iro Thin Muck B7) Gauge or V (B8 Other (Exp X Depth (inch X Depth (inch	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce n Reduct Surface Vell Data lain in Re es): es):	(B14) (B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9) emarks)	(4) ed Soils (0	Secondary I Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X FAC-Ne d Hydrology Prese	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) eutral Test (D5)
	Depth (i Remarks: TYDROL Wetland H Primary In Surfac High V Satura Water Sedim Drift C Algal Iron D Inunda Spars Field Obs Surface W Water Tab Saturation (includes of Describe F	-OGY Hydrology Indicator Indicators (minimum of ce Water (A1) Water Table (A2) ation (A3) r Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4) Deposits (B5) ation Visible on Aeria sely Vegetated Conce servations: //ater Preser Yes oble Present? Yes n Present? Yes capillary fringe)	al Imagery (I ave Surface No No	Water-Stai Aquatic Fa True Aqua Oxidized F Presence o Recent Iro Thin Muck B7) Gauge or V (B8 Other (Exp X Depth (inch X Depth (inch	ned Leav una (B13 tic Plants Sulfide O thizosphe of Reduce n Reduct Surface Vell Data lain in Re es): es):	(B14) (B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9) emarks)	(4) ed Soils (0	Secondary I Surface Drainag Dry-Sea Crayfish s (C3) Saturati Stunted C6) X FAC-Ne d Hydrology Prese	ndicators (minimum of two require Soil Cracks (B6) e Patterns (B10) ison Water Table (C2) n Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) eutral Test (D5)

Project/Site: Anderson Princeton Development		City/Coun	ty: Princeton		Sampling Date:	7/25/2018
Applicant/Owner: Paul and Marijo Anderson				State: IA	Sampling Point:	U3 (6)
Investigator(s): Wilson/Brockett		Section, T	ownship, Ran	ge: <u>Sec 10, T 79 N, R</u>	5 E	
Landform (hillside, terrace, etc.): Hillside			Local relief (	concave, convex, none	): Convex	
Slope (%): 5-10% Lat: 41.666105		Long: -	90.355907		Datum: NAD 83	
Soil Map Unit Name Timula				NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typi	ical for this time o	of year?	Yes X N	lo (If no, explain	in Remarks.)	
Are Vegetation, Soil, or Hydrology		•				X No
Are Vegetation, Soil, or Hydrology				ed, explain any answers		
SUMMARY OF FINDINGS – Attach site						atures, etc.
Hydrophytic Vegetation Present? Yes	No X	Is the	e Sampled Ar	ea		
Hydric Soil Present? Yes	No X	withi	n a Wetland?	Yes	<u>No X</u>	
Wetland Hydrology Present? Yes	<u>No X</u>	_				
Remarks:						
VEGETATION – Use scientific names of	plants.					
Tree Stratum (Plot size)	Absolute % Cover	Dominant	Indicator Status	Dominance Test w	orkehoot:	
Tree Stratum       (Plot size:)         1. Quercus alba	<u>% Cover</u> 60	Species? Yes	FACU			
2. Ulmus rubra	40	Yes	FAC	Number of Dominan That Are OBL, FAC	•	2 (A)
3. Celtis occidentalis	20	No	FAC	Total Number of Dor	· · · · · · · · · · · · · · · · · · ·	( )
4.				Species Across All S		5 (B)
5.				Percent of Dominan	t Species	
	120 =	Total Cover		That Are OBL, FAC	N, or FAC: 4	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15	)					
1. Lonicera tatarica	20	Yes	FACU	Prevalence Index w		ť
2				Total % Cover OBL species	0 x 1 =	tiply by: 0
4.				FACW species		0
5.				·	$\frac{120}{120}$ x 3 =	360
	20 =	Total Cover			100 x 4 =	400
Herb Stratum (Plot size: 5 )				-	50 x 5 =	250
1. Toxicodendron radicans	60	Yes	FAC	Column Totals	270 (A)	1010 (B)
2. Ribes rotundifolium	50	Yes	UPL	Prevalence In	idex = B/A =	3.74
3. Lonicera tatarica	20	No	FACU			
4				Hydrophytic Veget		
5					or Hydrophytic Veo	jetation
6.				2 - Dominance		
7				3 - Prevalence I	ndex is ≤3.0° al Adaptations <sup>1</sup> (Pr	ovido ourocati-
8 9.			<u> </u>		al Adaptations (Pr	
9 10					drophytic Vegetatio	
Woody Vine Stratum (Plot size: 30	130 =	Total Cover		<sup>1</sup> Indicators of hydric be present, unless d	soil and wetland h	ydrology must
1.	/			•		
2.		·		Hydrophytic Vegetation		
	==	Total Cover		-	resNo	Х
Remarks: (Include photo numbers here or on a s	separate sheet )					

Sampling Point:	U3 (	6)	

Profile Description: (Describe to th Depth Matrix	-	x Features			· · · · · · · · ,
nches) Color (moist) %	Color (moist)	% Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-24 10YR 3/1 100	,			Loamy/Clayey	
			·		
			·		
			·		
			·		
ype: C=Concentration, D=Depletior	n, RM=Reduced Matrix,	MS=Masked San	d Grains.	<sup>2</sup> Location: PL=Po	ore Lining, M=Matrix.
dric Soil Indicators:				Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Gley	yed Matrix (S4)		Coast Prai	ie Redox (A16)
Histic Epipedon (A2)	Sandy Red	lox (S5)		Iron-Manga	anese Masses (F12)
Black Histic (A3)	Stripped M	atrix (S6)		Red Paren	t Material (F21)
Hydrogen Sulfide (A4)	Dark Surfa	( )		Very Shall	ow Dark Surface (TF12)
Stratified Layers (A5)		cky Mineral (F1)		Other (Exp	lain in Remarks)
2 cm Muck (A10)		yed Matrix (F2)			
Depleted Below Dark Surface (A1	· ·	( )		2	
Thick Dark Surface (A12)		k Surface (F6)			/drophytic vegetation and
Sandy Mucky Mineral (S1)		ark Surface (F7)			drology must be present,
5 cm Mucky Peat or Peat (S3)	Redox Dep	oressions (F8)		unless dist	urbed or problematic.
estrictive Layer (if observed):					
_					
Type:					
Depth (inches):				Hydric Soil Presen	t? Yes NoX
Depth (inches): emarks:				Hydric Soil Presen	t? Yes No_X_
Depth (inches): emarks: /DROLOGY				Hydric Soil Presen	t? Yes No_X_
Depth (inches): emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one is	required; check all that	apply)		<u>Secondary Indi</u>	cators (minimum of two required
Depth (inches): emarks: /DROLOGY /etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1)	Water-Stair	ned Leaves (B9)		<u>Secondary Indi</u>	cators (minimum of two required
Depth (inches): emarks: /DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2)	Water-Stain Aquatic Fa	ned Leaves (B9) una (B13)		Secondary Indi	cators (minimum of two required il Cracks (B6) 'atterns (B10)
Depth (inches): emarks: /DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stain Aquatic Fa True Aquat	ned Leaves (B9) una (B13) tic Plants (B14)		Secondary Indi Surface Sc Drainage F Dry-Seaso	cators (minimum of two required il Cracks (B6) 'atterns (B10) n Water Table (C2)
Depth (inches): emarks: //DROLOGY /etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stain Aquatic Fa True Aquat Hydrogen S	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1)		Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Bu	cators (minimum of two required il Cracks (B6) latterns (B10) n Water Table (C2) urrows (C8)
Depth (inches): emarks: //DROLOGY etland Hydrology Indicators: imary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L	iving Roots	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Br (C3) Saturation	cators (minimum of two required il Cracks (B6) 'atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9)
Depth (inches): emarks: //DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L of Reduced Iron (	iving Roots. C4)	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Bu (C3) Saturation Stunted or	cators (minimum of two required il Cracks (B6) 'atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Depth (inches): emarks: //DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one is Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4)	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iror	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L of Reduced Iron (in n Reduction in Til	iving Roots. C4)	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Br (C3) Saturation Stunted or 6) Geomorph	cators (minimum of two required il Cracks (B6) latterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Depth (inches): emarks: //DROLOGY /etland Hydrology Indicators: imary Indicators (minimum of one is 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-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iror Thin Muck	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L of Reduced Iron ( n Reduction in Til Surface (C7)	iving Roots. C4)	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Br (C3) Saturation Stunted or 6) Geomorph	cators (minimum of two required il Cracks (B6) 'atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1)
Depth (inches): marks: <b>DROLOGY</b> etland Hydrology Indicators: imary Indicators (minimum of one is 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	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iror Thin Muck ery (B7) Gauge or V	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L of Reduced Iron ( n Reduction in Til Surface (C7) Vell Data (D9)	iving Roots. C4)	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Br (C3) Saturation Stunted or 6) Geomorph	cators (minimum of two required il Cracks (B6) l'atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Depth (inches): emarks: //DROLOGY /etland Hydrology Indicators: imary Indicators (minimum of one is 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 Sparsely Vegetated Concave Sur	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iror Thin Muck ery (B7) Gauge or V	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L of Reduced Iron ( n Reduction in Til Surface (C7)	iving Roots. C4)	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Br (C3) Saturation Stunted or 6) Geomorph	cators (minimum of two required il Cracks (B6) latterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Depth (inches): marks: <b>DROLOGY</b> etland Hydrology Indicators: imary Indicators (minimum of one is 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 Sparsely Vegetated Concave Sur eld Observations:	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck ery (B7) Gauge or V face (B§ Other (Exp	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L of Reduced Iron (in n Reduction in Til Surface (C7) Vell Data (D9) lain in Remarks)	iving Roots. C4)	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Br (C3) Saturation Stunted or 6) Geomorph	cators (minimum of two required il Cracks (B6) latterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Depth (inches): emarks: <b>/DROLOGY</b> etland Hydrology Indicators: imary Indicators (minimum of one is 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 Sparsely Vegetated Concave Sur eld Observations: urface Water Preser Yes	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck ery (B7) Gauge or V face (B§ Other (Exp	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L of Reduced Iron (in n Reduction in Til Surface (C7) Vell Data (D9) lain in Remarks) es):	iving Roots. C4)	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Br (C3) Saturation Stunted or 6) Geomorph	cators (minimum of two required il Cracks (B6) latterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2)
Depth (inches): emarks: /DROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one is 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 Sparsely Vegetated Concave Sur eld Observations: urface Water Preser Yes fater Table Present? Yes	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck ery (B7) Gauge or V face (B8 Other (Exp No X Depth (incher No X Depth (incher	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L of Reduced Iron (in n Reduction in Til Surface (C7) Vell Data (D9) lain in Remarks) es):	iving Roots C4) Ied Soils (C6	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Br (C3) Saturation Stunted or 6) Geomorph	cators (minimum of two required il Cracks (B6) 'atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Depth (inches): emarks: <b>/DROLOGY</b> /etland Hydrology Indicators: rimary Indicators (minimum of one is 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 Sparsely Vegetated Concave Sur ield Observations: urface Water Preser Yes /ater Table Present? Yes aturation Present? Yes	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck ery (B7) Gauge or V face (B& Other (Exp No X Depth (incher No X Depth (incher	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L of Reduced Iron (in n Reduction in Til Surface (C7) Vell Data (D9) lain in Remarks) es):	iving Roots C4) Ied Soils (C6	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Bu (C3) Saturation Stunted or 6) Geomorph FAC-Neutr	cators (minimum of two required il Cracks (B6) 'atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Depth (inches): temarks: YDROLOGY Yetland Hydrology Indicators: rrimary Indicators (minimum of one is 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 Sparsely Vegetated Concave Sur ield Observations: urface Water Preser Yes Vater Table Present? Yes	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck ery (B7) Gauge or V face (B8 Other (Exp No X Depth (inche No X Depth (inche	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L of Reduced Iron (t n Reduction in Til Surface (C7) Vell Data (D9) lain in Remarks) es): es):	iving Roots C4) Ied Soils (C6	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Br (C3) Saturation Stunted or 5) Geomorph FAC-Neutr	cators (minimum of two required il Cracks (B6) 'atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Depth (inches): emarks: emarks: YDROLOGY /etland Hydrology Indicators: rimary Indicators (minimum of one is 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 Sparsely Vegetated Concave Sur ield Observations: urface Water Preser Yes /ater Table Present? Yes aturation Present? Yes aturation Present? Yes escribe Recorded Data (stream gauge	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck ery (B7) Gauge or V face (B8 Other (Exp No X Depth (inche No X Depth (inche	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L of Reduced Iron (t n Reduction in Til Surface (C7) Vell Data (D9) lain in Remarks) es): es):	iving Roots C4) Ied Soils (C6	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Br (C3) Saturation Stunted or 5) Geomorph FAC-Neutr	cators (minimum of two required il Cracks (B6) 'atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)
Depth (inches): emarks: <b>/DROLOGY</b> <b>/etland Hydrology Indicators:</b> rimary Indicators (minimum of one is 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 Sparsely Vegetated Concave Sur <b>ield Observations:</b> urface Water Preser Yes aturation Present? Yes aturation Present? Yes aturation Present? Yes Mater Table Present? Yes Algal Mator Crust (Particular)	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck ery (B7) Gauge or V face (B8 Other (Exp No X Depth (inche No X Depth (inche	ned Leaves (B9) una (B13) tic Plants (B14) Sulfide Odor (C1) hizospheres on L of Reduced Iron (t n Reduction in Til Surface (C7) Vell Data (D9) lain in Remarks) es): es):	iving Roots C4) Ied Soils (C6	Secondary Indi Surface Sc Drainage F Dry-Seaso Crayfish Br (C3) Saturation Stunted or 5) Geomorph FAC-Neutr	cators (minimum of two required il Cracks (B6) 'atterns (B10) n Water Table (C2) urrows (C8) Visible on Aerial Imagery (C9) Stressed Plants (D1) c Position (D2) al Test (D5)

Project/Site: Anderson Princeton Development		City/Cour	ty: Princeton		Sampling Date:	7/25/2018
Applicant/Owner: Paul and Marijo Anderson				State: IA	Sampling Point:	W4 (7)
Investigator(s): Wilson/Brockett		Section, 1	ownship, Rai	nge: Sec 11, T 79 N, R	5 E	
Landform (hillside, terrace, etc.): Drainageway			Local relief (	(concave, convex, none	): Concave	
Slope (%): 0-2% Lat: 41.655945		Long: -	90.349937		Datum: NAD 83	
Soil Map Unit Name Fayette				NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typica	al for this time	of year?	Yes X I	No (If no, explain	in Remarks.)	
Are Vegetation, Soil, or Hydrology	signific					X No
Are Vegetation, Soil, or Hydrology				ed, explain any answer		
SUMMARY OF FINDINGS – Attach site				ocations, transect	s, important fe	atures, etc.
Hydrophytic Vegetation Present? Yes X	No	Is the	Sampled A	rea		
Hydric Soil Present? Yes X			n a Wetland	? Yes X	No	
Wetland Hydrology Present?         Yes         X	No					
Remarks:						
VEGETATION – Use scientific names of p	lants.					
	Absolute	Dominant	Indicator			
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test w		
1. <u>Salix nigra</u> 2.	30	Yes	OBL	Number of Dominan That Are OBL, FAC		2 (A)
3.				Total Number of Dor		<b>a</b> (D)
4.				Species Across All S		2(B)
5		=Total Cover		Percent of Dominan That Are OBL, FAC		0.0% (A/B)
Sapling/Shrub Stratum (Plot size:1.	_)			Prevalence Index w	vorkshoot:	
2.				Total % Cover		iply by:
3.					30 x 1 =	30
4.				· · ·	100 x 2 =	200
5.				FAC species	0 x 3 =	0
		=Total Cover		FACU species	0 x 4 =	0
Herb Stratum (Plot size: )				UPL species	0 x 5 =	0
1. Phalaris arundinacea	100	Yes	FACW	Column Totals:	130 (A)	230 (B)
2.				Prevalence In	idex = B/A =	1.77
3						
4				Hydrophytic Veget		
5					or Hydrophytic Veg	etation
6.				X 2 - Dominance		
7 8.				X 3 - Prevalence I	al Adaptations <sup>1</sup> (Pr	ovido supportin
9.	·				rks or on a separat	
9 10.					drophytic Vegetatio	,
	100	=Total Cover		<sup>1</sup> Indicators of hydric	., .	,
Woody Vine Stratum (Plot size:	)			be present, unless d	isturbed or problen	natic.
1				Hydrophytic		
2		-Total Court		Vegetation		
		=Total Cover		Present? Y	/es_X_No_	
Remarks: (Include photo numbers here or on a se	parate sheet.	)				

Sampling Point:	W4 (7)
eaniphing i eniti	••• • (• )

Depth         Matrix         Redox Features           (inches)         Color (moist)         %         Type'         Loc"         Texture         Remarks           0-2         10YR 3/1         100	
0-2       10YR 3/1       100	
2-8       10YR 3/1       95       7.5YR 4/6       5       C       M       Loamy/Clayey       Prominent redox concer         8-24       10YR 4/2       100	
8-24       10YR 4/2       100       Loamy/Clayey         "Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.       *Location: PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric So         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histosol (A2)       Sandy Redox (S5)       Iron-Manganese Masses (F12)         Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (F21)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Loamy Gleyed Matrix (F2)       Depleted Matrix (F2)         Depleted Bolow Dark Surface (A12)       X       Redox Depressions (F8)       alindicators of hydrophytic vegetation an wetland hydrology must be present unless disturbed or problematic.         Type:	
Image: Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.       PL=Pore Lining, M=Matrix.         Hydric Soil Indicators:       Indicators for Problematic Hydric Soi         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histosol (A2)       Sandy Redox (S5)       Iron-Manganese Masses (F12)         Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (F21)         Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       3 <sup>1</sup> ndicators of hydrophytic vegetation an wetland hydrology must be present unless disturbed or problematic.         Restrictive Layer (if observed):       Type:       muless disturbed or problematic.         Type:       Depleted Matrix (F1)       Unless disturbed or problematic.         Restrictive Layer (if observed):       Type:       Mydric Soil Present?       Yes	ls <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soi         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histosol (A2)       Sandy Redox (S5)       Iron-Manganese Masses (F12)         Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (F21)         Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Loamy Gleyed Matrix (F2)       Depleted Below Dark Surface (A11)       Depleted Matrix (F3)         Thick Dark Surface (A12)       X       Redox Dark Surface (F7)       wetland hydrology must be present         5 cm Mucky Peat or Peat (S3)       Redox Depressions (F8)       unless disturbed or problematic.       No         Remarks:       x       No       Remarks:       x       No         Remarks:       x       Secondary Indicators (minimum of two or Surface Soil Cracks (B6)       Drainage Patterns (B10)         Hydrogen Sulfide O(A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Fauna (B14)       Dry-Season Water Table (C2)       Crayfish Burrows (C8)	ls <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soi         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)       Red Parent Material (F21)         Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       "Indicators of hydrophytic vegetation an wetland hydrology must be present         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present         Som Mucky Peat or Peat (S3)       Redox Depressions (F8)       unless disturbed or problematic.         Type:	ls <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soi         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histosol (A2)       Sandy Redox (S5)       Iron-Manganese Masses (F12)         Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (F21)         Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Loamy Gleyed Matrix (F2)       Depleted Below Dark Surface (A11)       Depleted Matrix (F3)         Thick Dark Surface (A12)       X       Redox Dark Surface (F7)       wetland hydrology must be present         5 cm Mucky Peat or Peat (S3)       Redox Depressions (F8)       unless disturbed or problematic.       No         Remarks:       x       No       Remarks:       x       No         Remarks:       x       Secondary Indicators (minimum of two or Surface Soil Cracks (B6)       Drainage Patterns (B10)         Hydrogen Sulfide O(A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Fauna (B14)       Dry-Season Water Table (C2)       Crayfish Burrows (C8)	ls <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soi         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histosol (A2)       Sandy Redox (S5)       Iron-Manganese Masses (F12)         Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (F21)         Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Loamy Gleyed Matrix (F2)       Depleted Below Dark Surface (A11)       Depleted Matrix (F3)         Thick Dark Surface (A12)       X       Redox Dark Surface (F7)       wetland hydrology must be present         5 cm Mucky Peat or Peat (S3)       Redox Depressions (F8)       unless disturbed or problematic.       No         Remarks:       x       No       Remarks:       x       No         Remarks:       x       Secondary Indicators (minimum of two or Surface Soil Cracks (B6)       Drainage Patterns (B10)         Hydrogen Sulfide O(A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Fauna (B14)       Dry-Season Water Table (C2)       Crayfish Burrows (C8)	ls <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soi         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histosol (A2)       Sandy Redox (S5)       Iron-Manganese Masses (F12)         Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (F21)         Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Depleted Matrix (F2)       Depleted Below Dark Surface (A11)       Depleted Dark Surface (F7)         Thick Dark Surface (A12)       X       Redox Dark Surface (F7)       wetland hydrology must be present         5 cm Mucky Peat or Peat (S3)       Redox Depressions (F8)       unless disturbed or problematic.         Type:	ls <sup>3</sup> :
Hydric Soil Indicators:       Indicators for Problematic Hydric Soi         Histosol (A1)       Sandy Gleyed Matrix (S4)       Coast Prairie Redox (A16)         Histosol (A2)       Sandy Redox (S5)       Iron-Manganese Masses (F12)         Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (F21)         Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Depleted Matrix (F2)       Depleted Below Dark Surface (A11)       Depleted Dark Surface (F7)         Thick Dark Surface (A12)       X       Redox Dark Surface (F7)       wetland hydrology must be present         5 cm Mucky Peat or Peat (S3)       Redox Depressions (F8)       unless disturbed or problematic.         Type:	ls <sup>3</sup> :
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)       Red Parent Material (F21)         Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Loamy Gleyed Matrix (F3)       Thick Dark Surface (A11)       Depleted Matrix (F3)         Thick Dark Surface (A12)       X       Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation an         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present         s cm Mucky Peat or Peat (S3)       Redox Depressions (F8)       unless disturbed or problematic.         Remarks:       x       X       No         Remarks:       x       X       No         Surface Water (A1)       Water-Stained Leaves (B9)       Surface Soil Cracks (B6)         HyDROLOGY       Mater Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Surface Soil Cracks (B6)       High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)         Surface Soil Cracks (B1)       Hydrogen Sulfide Odor (C1) <td>IS :</td>	IS :
Histic Epipedon (A2)       Sandy Redox (S5)       Iron-Manganese Masses (F12)         Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (F21)         Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Loamy Gleyed Matrix (F2)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)       "Indicators of hydrophytic vegetation an wetland hydrology must be present unless disturbed or problematic."         Restrictive Layer (if observed):       Type:	
Black Histic (A3)       Stripped Matrix (S6)       Red Parent Material (F21)         Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)         Thick Dark Surface (A12)       X Redox Dark Surface (F6)         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)         set on Muck Peat or Peat (S3)       Redox Depressions (F8)         Upper	
Hydrogen Sulfide (A4)       Dark Surface (S7)       Very Shallow Dark Surface (TF12)         Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)         Thick Dark Surface (A12)       X Redox Dark Surface (F6)         3 Indicators of hydrophytic vegetation an Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)         wetland hydrology must be present       unless disturbed or problematic.         Restrictive Layer (if observed):       Type:         Depth (inches):       Hydric Soil Present? Yes X       No         Remarks:       x         X       Secondary Indicators:       Surface Soil Cracks (B6)         Primary Indicator (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)       Crayfish Burrows (C8)	
Stratified Layers (A5)       Loamy Mucky Mineral (F1)       Other (Explain in Remarks)         2 cm Muck (A10)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A12)       X         Thick Dark Surface (A12)       X         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F6)         Sandy Mucky Peat or Peat (S3)       Depleted Dark Surface (F7)         Restrictive Layer (if observed):       Type:         Type:       Depleted Inclusion (Inclusion)         Depth (inches):       Hydric Soil Present?       Yes_X         Remarks:       x         Y       Scondary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two required); Charace (B6)         Primary Indicators (minimum of one is required; check all that apply)       Surface Water (A1)       Surface Soil Cracks (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)       Drainage Patterns (B10)         Saturation (A3)       True Aquatic Plants (B14)       Dry-Season Water Table (C2)       Crayfish Burrows (C8)	
2 cm Muck (A10)       Loamy Gleyed Matrix (F2)         Depleted Below Dark Surface (A11)       Depleted Matrix (F3)         Thick Dark Surface (A12)       X         Redox Dark Surface (F6) <sup>3</sup> Indicators of hydrophytic vegetation an wetland hydrology must be present unless disturbed or problematic.         Restrictive Layer (if observed):       Type:         Depth (inches):       Hydric Soil Present? Yes X         No         Remarks:       x         X         Vetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)         Surface Water (A1)       Water-Stained Leaves (B9)         Sturface Water (A1)       Aquatic Fauna (B13)         Primary Indicators (B1)       True Aquatic Plants (B14)         Dry-Season Water Table (C2)       Aquatic Plants (B14)         Water Marks (B1)       Hydrogen Sulfide Odor (C1)	
Depleted Below Dark Surface (A11)       Depleted Matrix (F3)         Thick Dark Surface (A12)       X         Sandy Mucky Mineral (S1)       Depleted Dark Surface (F6)         5 cm Mucky Peat or Peat (S3)       Redox Depressions (F8)         Restrictive Layer (if observed):       rype:         Type:	
Thick Dark Surface (A12)       X       Redox Dark Surface (F6)       3 <sup>1</sup> Indicators of hydrophytic vegetation an wetland hydrology must be present unless disturbed or problematic.         S or Mucky Peat or Peat (S3)       Depleted Dark Surface (F7)       wetland hydrology must be present unless disturbed or problematic.         Restrictive Layer (if observed):       Type:	
Sandy Mucky Mineral (S1)       Depleted Dark Surface (F7)       wetland hydrology must be present         5 cm Mucky Peat or Peat (S3)       Redox Depressions (F8)       unless disturbed or problematic.         Restrictive Layer (if observed):       Type:	4
5 cm Mucky Peat or Peat (S3)       Redox Depressions (F8)       unless disturbed or problematic.         Restrictive Layer (if observed):       Type:	
Restrictive Layer (if observed):         Type:	
Type:       Hydric Soil Present?       Yes _ X       No         Remarks:       x       No       No         HYDROLOGY       Vetland Hydrology Indicators:       Vetland Hydrology Indicators:       No         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two restricts (Minimum of two restrints (Minimum of two restricts (Minimum of two restricts (Minimum o	
Depth (inches):       Hydric Soil Present?       Yes X       No         Remarks:       x       X	
Remarks:         x         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two regulators)         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)       Crayfish Burrows (C8)	
x         HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two regulated is the colspan="2">Secondary Indicators (B6)         High Water Table (A2)       Aquatic Fauna (B13)       Drainage Patterns (B10)       Dry-Season Water Table (C2)         Saturation (A3)       Hydrogen Sulfide Odor (C1)       Crayfish Burrows (C8)       Secondary Indicators (C2)       Secondary Indicators (C2)       Secondary Indicators (C2)       Secondary Indicators (C2)       S	
HYDROLOGY         Wetland Hydrology Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two regulators)         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)       Crayfish Burrows (C8)	
Wetland Hydrology Indicators:       Secondary Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two regulators)         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)       Crayfish Burrows (C8)	
Wetland Hydrology Indicators:       Secondary Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two regulators)         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)       Crayfish Burrows (C8)	
Wetland Hydrology Indicators:       Secondary Indicators:         Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two regulators)         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)       Crayfish Burrows (C8)	
Wetland Hydrology Indicators:       Secondary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two regulators (minimum of twiter regulators (minimum of two regulators (minimum of two regulat	
Primary Indicators (minimum of one is required; check all that apply)       Secondary Indicators (minimum of two response)         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)       Crayfish Burrows (C8)	
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)Crayfish Burrows (C8)	oquirod)
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)Crayfish Burrows (C8)	<u>equirea)</u>
Saturation (A3)True Aquatic Plants (B14)Dry-Season Water Table (C2)Water Marks (B1)Hydrogen Sulfide Odor (C1)Crayfish Burrows (C8)	
Water Marks (B1)     Hydrogen Sulfide Odor (C1)     Crayfish Burrows (C8)	
	(C9)
Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1)	(00)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2)	
Iron Deposits (B5) Thin Muck Surface (C7) X FAC-Neutral Test (D5)	
Inundation Visible on Aerial Imagery (B7) Gauge or Well Data (D9)	
Sparsely Vegetated Concave Surface (B8 Other (Explain in Remarks)	
Field Observations:	
Surface Water Preser Yes No X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes X No	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Demoder	
Remarks:	

Project/Site: Anderson Princeton Development		City/Coun	ty: Princeton		Sampling Date:	7/25/2018
Applicant/Owner: Paul and Marijo Anderson				State: IA	Sampling Point:	U4 (8)
Investigator(s): Wilson/Brockett		Section, T	ownship, Ran	nge: Sec 11, T 79 N, R	5 E	
Landform (hillside, terrace, etc.): Hillside			Local relief (	concave, convex, none	): convex	
Slope (%): 5-10% Lat: 41.655974		Long: -	- 90.349937		Datum: NAD 83	
Soil Map Unit Name Fayette				NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical	for this time	of vear?	Yes X N	lo (If no, explain	in Remarks.)	
Are Vegetation , Soil , or Hydrology		-				X No
Are Vegetation, Soil, or Hydrology				ed, explain any answers	·	
SUMMARY OF FINDINGS – Attach site n						atures, etc.
Hydrophytic Vegetation Present? Yes	No X	Is the	Sampled Ar	ea		
	No X		n a Wetland?		No X	
Wetland Hydrology Present? Yes						
Remarks: VEGETATION – Use scientific names of pla	ante					
	Absolute	Dominant	Indicator			
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test we	orksheet:	
1				Number of Dominan		
2				That Are OBL, FAC	N, or FAC:	1 (A)
3.				Total Number of Dor		а ( <b>р</b> )
4 5				Species Across All S		<u>3</u> (B)
· · · · · · · · · · · · · · · · · · ·		=Total Cover		Percent of Dominant That Are OBL, FAC	•	8.3% (A/B)
Sapling/Shrub Stratum (Plot size: 15	)					
1				Prevalence Index w		
2				Total % Cover		iply by:
3			·	OBL species	$\begin{array}{c} 0 \\ 0 \\ x \\ 1 \\ x \\ 2 \\ x \\ x$	0
5.				FACW species FAC species	$\begin{array}{c} 0 \\ 40 \\ x & 3 = \end{array}$	120
		=Total Cover		-	$\frac{40}{40}$ x 4 =	160
Herb Stratum (Plot size: 5)					80 x 5 =	400
1. Zea mays	50	Yes	UPL	Column Totals	160 (A)	680 (B)
2. Helianthus annuus	40	Yes	FACU	Prevalence In	idex = B/A =	4.25
3. <u>Setaria glauca</u>	40	Yes	FAC			
4. Pastinaca sativa	30	No	UPL	Hydrophytic Veget		
5				·	or Hydrophytic Veg	etation
6				2 - Dominance		
7	. <u> </u>			3 - Prevalence I	ndex is ≤3.0' al Adaptations <sup>1</sup> (Pr	ovido oun <del>rer</del> i
8 9.					rks or on a separat	
9. 10.					drophytic Vegetatio	,
<sup>···</sup>	160	=Total Cover		<sup>1</sup> Indicators of hydric	., .	· · /
Woody Vine Stratum (Plot size: 30 )				be present, unless d		0,
1			·	Hydrophytic		
4.		=Total Cover		Vegetation Present? Y	es No	x
					/esNo	<u>^</u>
Remarks: (Include photo numbers here or on a sep	arate sneet.	)				

Sampling Point:	U4 (8	3)

Profile De Depth	Matrix		Redo	x Feature	es			
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-24	10YR 3/4	100					Loamy/Clayey	
		·						
		·						
		·						
		·						
	Concentration, D=D	epletion, RM	=Reduced Matrix,	MS=Mas	ked Sand	Grains.		Pore Lining, M=Matrix.
-	il Indicators:		Querrate Olive					r Problematic Hydric Soils <sup>3</sup> :
	ol (A1) Eninadan (A2)		Sandy Gley		x (S4)			airie Redox (A16)
	Epipedon (A2)		Sandy Red Stripped M				`	ganese Masses (F12) nt Material (F21)
	Histic (A3) gen Sulfide (A4)		Dark Surfa		)			llow Dark Surface (TF12)
-	ied Layers (A5)		Loamy Mu	• •	ral (F1)			plain in Remarks)
	Muck (A10)		Loamy Gle	•	• •			
	ted Below Dark Surf	ace (A11)	Depleted M					
	Dark Surface (A12)	400 (7111)	Redox Dar	•	·		<sup>3</sup> Indicators of	hydrophytic vegetation and
	Mucky Mineral (S1)	)	Depleted D		( )			ydrology must be present,
-	Mucky Peat or Peat		Redox Dep					sturbed or problematic.
estrictiv	e Layer (if observe	d):						
Туре:								
			_				Hydric Soil Prese	ent? Yes <u>No X</u>
Type: Depth (ir Remarks:	nches):		_				Hydric Soil Prese	ent? Yes <u>No X</u>
Type: Depth (ir emarks: YDROL	nches):						Hydric Soil Prese	ont? Yes <u>No X</u>
Type: Depth (in temarks: YDROL	OGY			apply)				
Type: Depth (ii emarks: YDROL /etland H rimary Ind	OGY				es (B9)		Secondary Inc.	dicators (minimum of two required
Type: Depth (ir emarks: /DROL /etland H rimary In- Surfac	OGY Iydrology Indicator dicators (minimum c æ Water (A1)		ired; check all that Water-Stain Aquatic Fa	ned Leav	• •		<u>Secondary Inc</u> Surface S	dicators (minimum of two required Soil Cracks (B6)
Type: Depth (ii emarks: YDROL /etland H rimary In Surfac High V	OGY lydrology Indicator		Water-Stair	ned Leav una (B13	)		Secondary Inc Surface S	dicators (minimum of two required
Type: Depth (ii emarks: YDROL /etland H rimary In Surfac  Surfac  Sature	OGY Jydrology Indicator dicators (minimum c ee Water (A1) Vater Table (A2)		Water-Stain	ned Leav una (B13 ic Plants	) (B14)		<u>Secondary Ind</u> Surface S Drainage Dry-Seas	dicators (minimum of two required Soil Cracks (B6) Patterns (B10)
Type: Depth (ii emarks: YDROL /etland H rimary Ind Surfac Surfac High V Satura Water	OGY Iydrology Indicator dicators (minimum o e Water (A1) Vater Table (A2) ation (A3)		Water-Stain Aquatic Fa True Aquat	ned Leav una (B13 ic Plants Sulfide O	) (B14) dor (C1)	ving Roots	Secondary Ind Surface S Drainage Dry-Seas Crayfish B	<u>dicators (minimum of two required</u> Soil Cracks (B6) Patterns (B10) on Water Table (C2)
Type: Depth (ii emarks: YDROL /etland H rimary In Surfac 	OGY lydrology Indicator dicators (minimum c æ Water (A1) Vater Table (A2) ation (A3) Marks (B1)		Water-Stain Aquatic Fa True Aquat	ned Leav una (B13 ic Plants Sulfide O hizosphe	) (B14) dor (C1) eres on Li	0	Secondary Ind Surface S Drainage Dry-Seas Crayfish B (C3) Saturation	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
Type: Depth (ii lemarks: YDROL /etland H rimary Ind Surfac  Surfac  Satura Water  Sedim  Drift D  Algal I	OGY Jydrology Indicator dicators (minimum c ee Water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3) Mat or Crust (B4)		Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iror	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce	) (B14) dor (C1) eres on Lir ed Iron (C	(4)	Secondary Inc Surface S Drainage Dry-Seas Crayfish E (C3) Saturation Stunted o 5) Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
Type: Depth (ii temarks: YDROL Vetland H trimary Inu Surfac High V Satura Water Sedim Drift D Algal I Iron D	OGY Jydrology Indicator dicators (minimum c ce Water (A1) Vater Table (A2) ation (A3) Marks (B1) marks (B1) ment Deposits (B2) Peposits (B3) Mat or Crust (B4) eposits (B5)	o <u>f one is requ</u>	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iror Thin Muck	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce n Reducti Surface (	) (B14) dor (C1) eres on Liv ed Iron (C fon in Tille (C7)	(4)	Secondary Inc Surface S Drainage Dry-Seas Crayfish E (C3) Saturation Stunted o 5) Geomorp	dicators (minimum of two required Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1)
Type: Depth (ii lemarks: YDROL /etland H rimary Inu Surfac High V Satura Vater Sedim Drift D Algal I Iron D Inunda	OGY Jydrology Indicator dicators (minimum c we Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) reposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria	o <u>f one is requ</u> al Imagery (B	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iror Thin Muck T) Gauge or V	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data	(B14) dor (C1) eres on Lir ed Iron (C fon in Tille (C7) (D9)	(4)	Secondary Inc Surface S Drainage Dry-Seas Crayfish E (C3) Saturation Stunted o 5) Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
Type: Depth (ii emarks: YDROL /etland H rimary Ind Surfac  Yater  Satura  Water  Sedim  Drift D  Algal I  Iron D  Inunda	OGY ydrology Indicator dicators (minimum of 22 Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) peposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca	o <u>f one is requ</u> al Imagery (B	Water-Stain Aquatic Fa True Aquat Hydrogen S Oxidized R Presence c Recent Iror Thin Muck 37) Gauge or V	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data	(B14) dor (C1) eres on Lir ed Iron (C fon in Tille (C7) (D9)	(4)	Secondary Inc Surface S Drainage Dry-Seas Crayfish E (C3) Saturation Stunted o 5) Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
Type: Depth (ii lemarks: YDROL /etland H rimary Ind Surfac  High V Satura  Water Sedim  Drift D Algal I  Iron D  Inunda Sparso	OGY Jydrology Indicator dicators (minimum of the Water (A1) Vater Table (A2) ation (A3) Marks (B1) tent Deposits (B2) Peposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations:	of one is requ al Imagery (B ave Surface (	Water-Stain Aquatic Fa True Aquati Hydrogen S Oxidized R Presence c Recent Iror Thin Muck B B Other (Exp	ned Leav una (B13 ic Plants Sulfide O hizosphe f Reduce n Reducti Surface ( Vell Data lain in Re	(B14) dor (C1) eres on Lir ed Iron (C fon in Tille (C7) (D9)	(4)	Secondary Inc Surface S Drainage Dry-Seas Crayfish E (C3) Saturation Stunted o 5) Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
Type: Depth (ii Remarks: YDROL Vetland H Primary In Surfac Water Sedim Drift D Algal I Iron D Inunda Spars: Gurface W	OGY Jydrology Indicator dicators (minimum of the Water (A1) Vater Table (A2) ation (A3) Marks (B1) tent Deposits (B2) Peposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations: ater Preser Yes	of one is requ al Imagery (B ave Surface (	Water-Stain     Aquatic Fa     True Aquati     Hydrogen 3     Oxidized R     Presence c     Recent Iror     Thin Muck 7) Gauge or V (B8 Other (Exp     X Depth (inched	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce n Reducti Surface ( Vell Data lain in Re	(B14) (B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9) emarks)	(4)	Secondary Inc Surface S Drainage Dry-Seas Crayfish E (C3) Saturation Stunted o 5) Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
Type: Depth (ii Remarks: YDROL Vetland H trimary Inu Surfac Water Sedim Drift D Algal I Iron D Inunda Sparss ield Obse Vater Tab	OGY Jydrology Indicator dicators (minimum co we Water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Peposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations: ater Preser Yes le Present? Yes	al Imagery (B ave Surface ( No	Water-Stain     Aquatic Fa     True Aquatic Fa     True Aquatic Fa     Oxidized R     Presence c     Recent Iror     Thin Muck     Other (Exp     X Depth (inche     X Depth     X D	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reducti Surface ( Vell Data lain in Re es): es):	(B14) (B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9) emarks)	:4) ed Soils (Cr	Secondary Ind Surface S Drainage Dry-Seas Crayfish E (C3) Saturation Stunted o 6) Geomorp FAC-Neu	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Type: Depth (ii Remarks: YDROL Vetland H Primary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Inunda Sparse Gurface W Vater Tab Gatration	OGY Jydrology Indicator dicators (minimum of the Water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Peposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations: ater Preser Yes le Present? Yes Present? Yes	al Imagery (B ave Surface ( No	Water-Stain     Aquatic Fa     True Aquati     Hydrogen 3     Oxidized R     Presence c     Recent Iror     Thin Muck 7) Gauge or V (B8 Other (Exp     X Depth (inched	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reducti Surface ( Vell Data lain in Re es): es):	(B14) (B14) dor (C1) eres on Li ed Iron (C ion in Tille (C7) (D9) emarks)	:4) ed Soils (Cr	Secondary Inc Surface S Drainage Dry-Seas Crayfish E (C3) Saturation Stunted o 5) Geomorp	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Type: Depth (ii Remarks: YDROL Vetland H Primary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Inunda Sparse Gurface W Vater Tab Saturation ncludes c	OGY Jydrology Indicator dicators (minimum co we Water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Peposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations: ater Preser Yes le Present? Yes	al Imagery (B ave Surface ( No No	Water-Stain     Aquatic Fai     True Aquatic Fai     True Aquatic Fai     Oxidized R     Presence of     Recent Iror     Thin Muck     Other (Exp     X     Depth (inche     )	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce Neducti Surface ( Vell Data lain in Re es):  es): 	) (B14) dor (C1) eres on Li end Iron (C on in Tille (C7) (D9) emarks)	(24) ed Soils (Co	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 5) Geomorp FAC-Neu	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Type: Depth (ii emarks: YDROL /etland H rimary Inu Surfac High V Satura Water Sedim Drift D Algal I Iron D Inunda Sparso ield Obss urface W /ater Tab aturation ncludes c escribe F	OGY Jydrology Indicator dicators (minimum of the Water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Peposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations: ater Preser Yes le Present? Yes Present? Yes apillary fringe)	al Imagery (B ave Surface ( No No	Water-Stain     Aquatic Fai     True Aquatic Fai     True Aquatic Fai     Oxidized R     Presence of     Recent Iror     Thin Muck     Other (Exp     X     Depth (inche     )	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce Neducti Surface ( Vell Data lain in Re es):  es): 	) (B14) dor (C1) eres on Li end Iron (C on in Tille (C7) (D9) emarks)	(24) ed Soils (Co	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 5) Geomorp FAC-Neu	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)
Type: Depth (ii lemarks: YDROL /etland H rimary Ind Surfac High V Satura Water Sedim Drift D Algal I Iron D Inunda Sparse ield Obse urface W /ater Tab aturation ncludes c	OGY Jydrology Indicator dicators (minimum of the Water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Peposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations: ater Preser Yes le Present? Yes Present? Yes apillary fringe)	al Imagery (B ave Surface ( No No	Water-Stain     Aquatic Fai     True Aquatic Fai     True Aquatic Fai     Oxidized R     Presence of     Recent Iror     Thin Muck     Other (Exp     X     Depth (inche     )	ned Leav una (B13 ic Plants Sulfide O hizosphe of Reduce Neducti Surface ( Vell Data lain in Re es):  es): 	) (B14) dor (C1) eres on Li end Iron (C on in Tille (C7) (D9) emarks)	(24) ed Soils (Co	Secondary Ind Surface S Drainage Dry-Seas (C3) Saturation Stunted o 5) Geomorp FAC-Neu	dicators (minimum of two required Boil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) or Stressed Plants (D1) hic Position (D2) tral Test (D5)

Project/Site: Anderson Princeton Development		City/Coun	ty: Princeton		Sampling Date:	7/25/2018
Applicant/Owner: Paul and Marijo Anderson				State: IA	Sampling Point:	W5 (9)
Investigator(s): Wilson/Brockett		Section, T	ownship, Ran	ge: <u>Sec 11, T 79 N, R</u>	5 E	
Landform (hillside, terrace, etc.): Stream Terrace			Local relief (	concave, convex, none	): None	
Slope (%): 0-2% Lat: 41.658112		Long: -	90.345360		Datum: NAD 83	
Soil Map Unit Name Dockery				NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typical for	or this time	of year?	Yes X N	lo(If no, explain	in Remarks.)	
Are Vegetation, Soil, or Hydrology	signific	antly disturbed	d? Are "Nor	mal Circumstances" pr	esent? Yes	X No
Are Vegetation, Soil, or Hydrology	natura	lly problematic	? (If neede	ed, explain any answers	s in Remarks.)	
SUMMARY OF FINDINGS – Attach site ma	ap show	ing sampli	ng point lo	cations, transect	s, important fea	atures, etc.
Hydrophytic Vegetation Present?     Yes     X       Hydric Soil Present?     Yes     X       Wetland Hydrology Present?     Yes     X	No No No		e Sampled Ar n a Wetland?		No	
Remarks:		_				
VEGETATION – Use scientific names of plan						
	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test w	orksheet:	
1. Platanus occidentalis	80	Yes	FACW	Number of Dominan		
2				That Are OBL, FAC	W, or FAC:	2 (A)
3				Total Number of Dor		
4				Species Across All S		2(B)
	80	=Total Cover		Percent of Dominant That Are OBL, FAC	•	0.0% (A/B)
Sapling/Shrub Stratum (Plot size:) 1.				Prevalence Index w	vorkshoot:	
2.				Total % Cover		oly by:
3.				OBL species	0 x 1 =	0
4.				FACW species	175 x 2 =	350
5				FAC species	0 x 3 =	0
_		=Total Cover		FACU species	0 x 4 =	0
Herb Stratum (Plot size:)				UPL species	0 x 5 =	0
1. Phalaris arundinacea	95	Yes	FACW		175 (A)	350 (B)
3.				Prevalence In	idex = B/A =	2.00
4.				Hydrophytic Veget	ation Indicators:	
5.					or Hydrophytic Vege	etation
6.				X 2 - Dominance		
7.				X 3 - Prevalence I	ndex is ≤3.0 <sup>1</sup>	
8.				4 - Morphologica	al Adaptations <sup>1</sup> (Pro	vide supportin
9					rks or on a separate	,
10				Problematic Hyd	drophytic Vegetatior	n <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size:)	95	=Total Cover		<sup>1</sup> Indicators of hydric be present, unless d		
1				Hydrophytic		
2		-T-t-l O		Vegetation	· · ·	
-		=Total Cover		Present? Y	res <u>X</u> No	
Remarks: (Include photo numbers here or on a separ	ate sheet.	)				

Sampling Point:	W5 (	9)	)

0-2 2-10 10-24 Type: C=Conce Hydric Soil India Histosol (A1 Histic Epiper Black Histic Hydrogen Str Stratified Lat 2 cm Muck ( Depleted Be Thick Dark S Sandy Muck	entration, D=Deple cators: ) don (A2) (A3) ulfide (A4) yers (A5)	100 7 95 7 100 etion, RM=Re	duced Matrix, I Sandy Gley Sandy Red Stripped Ma Dark Surfac Loamy Muc	yed Matrix ox (S5) atrix (S6)	Type <sup>1</sup> C C C C C C C C C C C C C C C C C C C	Loc <sup>2</sup> M Grains.	Indicators fo	Remarks Prominent redox concentration Prominent redox concentration Prominent redox concentration Prome Lining, M=Matrix. or Problematic Hydric Soils <sup>3</sup> : rairie Redox (A16)
2-10 10-24 Type: C=Conce Hydric Soil Indi Histosol (A1 Histic Epiper Black Histic Hydrogen St Stratified Lat 2 cm Muck ( Depleted Be Thick Dark S Sandy Muck 5 cm Mucky	10YR 4/2 10YR 4/2 10YR 4/2 entration, D=Deple cators: ) don (A2) (A3) ulfide (A4) yers (A5) (A10) elow Dark Surface Surface (A12) sy Mineral (S1)	95 7 100 	duced Matrix, I Sandy Gley Sandy Red Stripped Ma Dark Surfac Loamy Muc	MS=Mask yed Matrix ox (S5) atrix (S6)			Loamy/Clayey Loamy/Clayey 2 Location: PL= Indicators for Coast P	Pore Lining, M=Matrix. or Problematic Hydric Soils <sup>3</sup> :
Type: C=Conce tydric Soil Indi Histosol (A1 Histic Epiper Black Histic Hydrogen Si Stratified La 2 cm Muck ( Depleted Be Thick Dark S Sandy Muck 5 cm Mucky	10YR 4/2 entration, D=Deple cators: ) don (A2) (A3) ulfide (A4) yers (A5) (A10) elow Dark Surface Surface (A12) sy Mineral (S1)	100	duced Matrix, I Sandy Gley Sandy Red Stripped Ma Dark Surfac Loamy Muc	MS=Mask yed Matrix ox (S5) atrix (S6)			Loamy/Clayey Loamy/Clayey 2 Location: PL= Indicators for Coast P	Pore Lining, M=Matrix. or Problematic Hydric Soils <sup>3</sup> :
Type: C=Conce lydric Soil Indi Histosol (A1 Histic Epiped Black Histic Hydrogen Si Stratified La 2 cm Muck ( Depleted Be Thick Dark S Sandy Muck 5 cm Mucky	entration, D=Deple cators: ) don (A2) (A3) ulfide (A4) yers (A5) 'A10) elow Dark Surface Surface (A12) :y Mineral (S1)	100	duced Matrix, I Sandy Gley Sandy Red Stripped Ma Dark Surfac Loamy Muc	MS=Mask yed Matrix ox (S5) atrix (S6)			Loamy/Clayey 2Location: PL= Indicators for Coast PL	Pore Lining, M=Matrix. or Problematic Hydric Soils <sup>3</sup> :
Type: C=Conce lydric Soil Indi Histosol (A1 Histic Epiped Black Histic Hydrogen Si Stratified Lat 2 cm Muck ( Depleted Be Thick Dark S Sandy Muck 5 cm Mucky	entration, D=Deple cators: ) don (A2) (A3) ulfide (A4) yers (A5) 'A10) elow Dark Surface Surface (A12) :y Mineral (S1)	etion, RM=Re	Sandy Gley Sandy Red Stripped Ma Dark Surfac Loamy Muc	yed Matrix ox (S5) atrix (S6)			<sup>2</sup> Location: PL= Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
ydric Soil Indi Histosol (A1 Histic Epiped Black Histic Hydrogen Si Stratified La 2 cm Muck ( Depleted Be Thick Dark S Sandy Muck 5 cm Mucky	cators: ) don (A2) (A3) ulfide (A4) yers (A5) (A10) elow Dark Surface Surface (A12) sy Mineral (S1)		Sandy Gley Sandy Red Stripped Ma Dark Surfac Loamy Muc	yed Matrix ox (S5) atrix (S6)		Grains.	Indicators fo	or Problematic Hydric Soils <sup>3</sup> :
Histosol (A1 Histic Epiper Black Histic Hydrogen Si Stratified La 2 cm Muck ( Depleted Be Thick Dark S Sandy Muck 5 cm Mucky	) don (A2) (A3) ulfide (A4) yers (A5) (A10) elow Dark Surface Surface (A12) sy Mineral (S1)	(A11)	Sandy Red Stripped Ma Dark Surfac Loamy Muc	ox (S5) atrix (S6)	k (S4)		Coast P	•
Black Histic Hydrogen Si Stratified La 2 cm Muck ( Depleted Be Thick Dark S Sandy Muck 5 cm Mucky	(A3) ulfide (A4) yers (A5) A10) elow Dark Surface Surface (A12) sy Mineral (S1)	(A11)	Stripped Ma Dark Surfac Loamy Muc	atrix (S6)				
Black Histic Hydrogen Si Stratified La 2 cm Muck ( Depleted Be Thick Dark S Sandy Muck 5 cm Mucky	(A3) ulfide (A4) yers (A5) A10) elow Dark Surface Surface (A12) sy Mineral (S1)	(A11)	Stripped Ma Dark Surfac Loamy Muc	atrix (S6)			Iron-Mar	nganese Masses (F12)
Stratified La 2 cm Muck ( Depleted Be Thick Dark S Sandy Muck 5 cm Mucky	yers (A5) (A10) elow Dark Surface Surface (A12) cy Mineral (S1)	(A11)	Loamy Muc	(\$7)			Red Par	ent Material (F21)
2 cm Muck ( Depleted Be Thick Dark S Sandy Muck 5 cm Mucky	A10) Iow Dark Surface Surface (A12) sy Mineral (S1)	(A11)					Very Sh	allow Dark Surface (TF12)
2 cm Muck ( Depleted Be Thick Dark S Sandy Muck 5 cm Mucky	A10) Iow Dark Surface Surface (A12) sy Mineral (S1)	(A11)		cky Miner	al (F1)			Explain in Remarks)
Thick Dark S Sandy Muck 5 cm Mucky	Surface (A12) xy Mineral (S1)	(A11)	LUAITIY GIE	yed Matri	x (F2)		`	
Sandy Muck 5 cm Mucky	xy Mineral (S1)		X Depleted M					
5 cm Mucky			Redox Darl				<sup>3</sup> Indicators of	f hydrophytic vegetation and
_	Peat or Peat (S3	_	Depleted D	ark Surfa	ce (F7)		wetland	hydrology must be present,
estrictive Laye		) —	Redox Dep	ressions	(F8)		unless d	listurbed or problematic.
YDROLOGY	,							
	ogy Indicators:							
•	rs (minimum of or	e is required;	check all that	apply)			Secondary Ir	ndicators (minimum of two required
Surface Wat	ter (A1)		Water-Stair	ned Leave	es (B9)		Surface	Soil Cracks (B6)
High Water	Table (A2)	_	Aquatic Fa	una (B13)	)			e Patterns (B10)
Saturation (A	43)	_	True Aquat	ic Plants	(B14)		Dry-Sea	ison Water Table (C2)
Water Marks	. ,	_	Hydrogen S		• •			Burrows (C8)
Sediment De	• • • •	_	Oxidized R	•		•		on Visible on Aerial Imagery (C9)
Drift Deposit	. ,	_	Presence o		•	,		or Stressed Plants (D1)
Algal Mat or	. ,	-	Recent Iror			ed Soils (C	,	phic Position (D2)
Iron Deposit	. ,		Thin Muck	`	,		X FAC-Ne	utral Test (D5)
	/isible on Aerial In getated Concave	• • • •	Gauge or V Other (Expl		• •			
eld Observation	-				marks			
urface Water P		No X	Depth (inche	<u>ee)</u> .				
ater Table Pre					—			
aturation Prese						Wetland	d Hydrology Preser	nt? Yes X No
					—		,,	· ····
ncludes capillar		gauge, monito	ring well, aeria	al photos,	previous	s inspectio	ons), if available:	
· · ·								

Project/Site: Anderson Princeton Development		City/Coun	ty: Princeton		Sampling Date:	7/25/2018
Applicant/Owner: Paul and Marijo Anderson				State: IA	Sampling Point:	U5 (10)
Investigator(s): Wilson/Brockett		Section, T	ownship, Rar	nge: Sec 11, T 79 N, R	5 E	
Landform (hillside, terrace, etc.): Hillslope			Local relief (	concave, convex, none	): Convex	
Slope (%): 5-10% Lat: 41.658147		Long: -	90.345338		Datum: NAD 83	
Soil Map Unit Name Dockery				NWI classif	ication: None	
Are climatic / hydrologic conditions on the site typica	al for this time	of year?	Yes X N	No (If no, explain	in Remarks.)	
Are Vegetation, Soil, or Hydrology						X No
Are Vegetation, Soil, or Hydrology				ed, explain any answers		
SUMMARY OF FINDINGS – Attach site					,	atures, etc.
Hydrophytic Vegetation Present? Yes	No X	Is the	Sampled Ar	ea		
Hydric Soil Present? Yes			n a Wetland?		No X	
Wetland Hydrology Present? Yes						
VEGETATION – Use scientific names of p	lants.					
Trop Stratum (Plot size:	Absolute % Cover	Dominant	Indicator	Dominance Test we	orkehoot:	
<u>Tree Stratum</u> (Plot size:) 1. <i>Juniperus virginiana</i>	<u>% Cover</u> 60	Species? Yes	Status FACU			
2. Quercus alba	50	Yes	FACU	Number of Dominan That Are OBL, FAC		1 (A)
3.				Total Number of Dor		
4.				Species Across All S		5 (B)
5.				Percent of Dominant	t Species	
	110	=Total Cover		That Are OBL, FAC	W, or FAC: 20	0.0% (A/B)
Sapling/Shrub Stratum (Plot size: 15	_)		54.011			
1. Lonicera tatarica	70	Yes	FACU	Prevalence Index w		alı dan da
2				Total % Cover OBL species	$\frac{\text{or:}}{0} \qquad x 1 =$	iply by: 0
4.				FACW species	0 x 2 =	0
5.				· · ·	30 x 3 =	90
	70	=Total Cover		· · · · · · · · · · · · · · · · · · ·	210 x 4 =	840
Herb Stratum (Plot size: 5 )				UPL species	0 x 5 =	0
1. Parthenocissus quinquefolia	30	Yes	FACU	Column Totals	240 (A)	930 (B)
2. Toxicodendron radicans	30	Yes	FAC	Prevalence In	idex = B/A =	3.88
3						
4.				Hydrophytic Veget		atatian
5 6.				2 - Dominance	or Hydrophytic Veg	etation
7.				3 - Prevalence I		
8.					al Adaptations <sup>1</sup> (Pro	ovide supportin
9.					rks or on a separat	
10.				Problematic Hyd	drophytic Vegetatio	n <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 30	<u>60</u>	=Total Cover		<sup>1</sup> Indicators of hydric be present, unless d		
1				Hydrophytic		
2				Vegetation		
		=Total Cover		Present? Y	res No	Х
Remarks: (Include photo numbers here or on a se	parate sheet.)	)				

Sampling Point: U5 (10)

Profile De	scription: (Descr	ibe to the dep	oth needed to doo	ument t	he indica	tor or co	nfirm the absence of i	indicators.)
Depth	Matrix			x Featur				
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-24	10YR 4/2	100					Loamy/Clayey	
<sup>1</sup> Type: C=	Concentration, D=	Depletion, RM	=Reduced Matrix,	MS=Mas	ked Sanc	l Grains.	<sup>2</sup> Location: PL=Pc	ore Lining, M=Matrix.
Hydric So	il Indicators:						Indicators for	Problematic Hydric Soils <sup>3</sup> :
Histos	ol (A1)		Sandy Gle	yed Matri	ix (S4)		Coast Prair	rie Redox (A16)
Histic	Epipedon (A2)		Sandy Red	lox (S5)			Iron-Manga	anese Masses (F12)
Black	Histic (A3)		Stripped M		)		Red Parent	t Material (F21)
	gen Sulfide (A4)		Dark Surfa					ow Dark Surface (TF12)
	ied Layers (A5)		Loamy Mu				Other (Exp	lain in Remarks)
	Muck (A10)		Loamy Gle	•	. ,			
	ted Below Dark Su		Depleted M				2	
Thick	Dark Surface (A12	)	Redox Dar	k Surface	e (F6)			vdrophytic vegetation and
	Mucky Mineral (S	,	Depleted D		• •			drology must be present,
5 cm l	Mucky Peat or Pea	t (S3)	Redox Dep	pressions	(F8)		unless dist	urbed or problematic.
Restrictiv	e Layer (if observ	ed):						
Туре:								
Depth (i	nches):		_				Hydric Soil Presen	t? Yes NoX
HYDROL	.OGY							
1	lydrology Indicate	ors:						
	dicators (minimum		red; check all that	apply)			Secondary Indi	cators (minimum of two required)
	e Water (A1)		Water-Stai		/es (B9)			il Cracks (B6)
	Vater Table (A2)		Aquatic Fa		• •			Patterns (B10)
	ation (A3)		True Aquat	tic Plants	, (B14)		Dry-Seaso	n Water Table (C2)
Water	Marks (B1)		Hydrogen S				Crayfish Bu	urrows (C8)
Sedim	ent Deposits (B2)		Oxidized R	hizosphe	eres on Li <sup>,</sup>	ving Roots	s (C3) Saturation	Visible on Aerial Imagery (C9)
Drift D	eposits (B3)		Presence of	of Reduce	ed Iron (C	4)	Stunted or	Stressed Plants (D1)
Algal	Mat or Crust (B4)		Recent Iron	n Reduct	ion in Tille	ed Soils (C	C6) Geomorphi	ic Position (D2)
Iron D	eposits (B5)		Thin Muck	Surface	(C7)		FAC-Neutr	al Test (D5)
Inunda	ation Visible on Ae	rial Imagery (B	7) Gauge or V	Vell Data	ı (D9)			
Spars	ely Vegetated Con	cave Surface (	B8Other (Exp	lain in Re	emarks)			
Field Obs	ervations:				T			
Surface W	ater Preser Ye	sNo	X Depth (inch	es):				
	le Present? Ye		X Depth (inch	· · · · · · · · · · · · · · · · · · ·				
Saturation		sNo	X Depth (inch	es):		Wetland	d Hydrology Present?	Yes No_X_
	apillary fringe)							
Describe F	Recorded Data (stre	eam gauge, m	onitoring well, aeria	al photos	, previous	s inspectio	ons), it available:	
Remarks:								
Achiarks:								

Project/Site: Anderson Princeton Development	City/County: Princeton	Sampling Date: 7/25/2018
Applicant/Owner: Paul and Marijo Anderson		State: IA Sampling Point: W6 (11)
Investigator(s): Wilson/Brockett	Section, Township, Range: Section, Township, Range: Section, Township, Range: Section, Sectio	ec 14, T 79 N, R 5 E
Landform (hillside, terrace, etc.): Drainage Swale	Local relief (concave	e, convex, none): <u>Concave</u>
Slope (%): 0-2% Lat: 41.655014	Long: -90.348566	Datum: NAD 83
Soil Map Unit Name: Dockery		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, or Hydrology	significantly disturbed? Are "Normal Cir	rcumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed, exp	lain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p showing sampling point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X	No Is the Sampled Area	
Hydric Soil Present? Yes X	No within a Wetland?	Yes <u>X</u> No
Wetland Hydrology Present? Yes X	No	
Remarks:		

## **VEGETATION** – Use scientific names of plants.

	Absolute	Dominant	Indicator	
Tree Stratum (Plot size:)	% Cover	Species?	Status	Dominance Test worksheet:
1				Number of Dominant Species
2				That Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant
4				Species Across All Strata: 1 (B)
5				Percent of Dominant Species
		=Total Cover		That Are OBL, FACW, or FAC: 100.0% (A/B)
Sapling/Shrub Stratum (Plot size:	)			
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3.				OBL species 0 x 1 = 0
4.				FACW species 95 x 2 = 190
5.				FAC species $0 \times 3 = 0$
		=Total Cover		FACU species 0 x 4 = 0
Herb Stratum (Plot size:)		-		UPL species $0 \times 5 = 0$
1. Phalaris arundinacea	95	Yes	FACW	Column Totals: 95 (A) 190 (B)
2.				Prevalence Index = B/A = 2.00
3.				
4.				Hydrophytic Vegetation Indicators:
5.				1 - Rapid Test for Hydrophytic Vegetation
6.				X 2 - Dominance Test is >50%
7.				X 3 - Prevalence Index is $\leq 3.0^{1}$
8				4 - Morphological Adaptations <sup>1</sup> (Provide supporting
9.				data in Remarks or on a separate sheet)
9 10.		<u> </u>		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
	95	=Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must
Woody Vine Stratum (Plot size:	)	-		be present, unless disturbed or problematic.
1				
2.				Hydrophytic Vegetation
		=Total Cover		Present? Yes X No
Remarks: (Include photo numbers here or on a sep	arate sheet.	)		

Profile Description: (Describe to the Depth Matrix		x Feature	es			
inches) Color (moist) %	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-8 10YR 2/1 95	7.5YR 4/6	5	С	М	Loamy/Clayey	Prominent redox concentrations
8-24 10YR 2/1 100	_				Loamy/Clayey	
Type: C=Concentration, D=Depletion,	RM=Reduced Matrix, M	/IS=Mask	ed Sand	Grains.		Pore Lining, M=Matrix.
lydric Soil Indicators:	Quarte Olar		(04)			or Problematic Hydric Soils <sup>3</sup> :
Histosol (A1)	Sandy Gley		(S4)			rairie Redox (A16)
Histic Epipedon (A2)	Sandy Red					nganese Masses (F12)
Black Histic (A3)	Stripped Ma					ent Material (F21)
Hydrogen Sulfide (A4)	Dark Surfac					allow Dark Surface (TF12)
Stratified Layers (A5)	Loamy Muc	-			Other (E	xplain in Remarks)
2 cm Muck (A10)	Loamy Gle					
Depleted Below Dark Surface (A11					2	
Thick Dark Surface (A12)	X Redox Dark		• •			f hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Depleted D		• •			hydrology must be present,
5 cm Mucky Peat or Peat (S3)	Redox Dep	ressions	(F8)		unless d	isturbed or problematic.
Restrictive Layer (if observed):						
Туре:						
Type: Depth (inches):					Hydric Soil Pres	ent? Yes <u>X</u> No
Type: Depth (inches): Remarks:					Hydric Soil Pres	ent? Yes <u>X</u> No
Type: Depth (inches): Remarks: YDROLOGY					Hydric Soil Pres	ent? Yes <u>X</u> No
Type: Depth (inches): Remarks: YDROLOGY Wetland Hydrology Indicators:	equired: check all that a					
Type: Depth (inches): Remarks: YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one is r					<u>Secondary Ir</u>	ndicators (minimum of two required)
Type: Depth (inches): Remarks: YDROLOGY Yetland Hydrology Indicators: Primary Indicators (minimum of one is r Surface Water (A1)	Water-Stair	ned Leave	· · /		<u>Secondary Ir</u> Surface	ndicators (minimum of two required) Soil Cracks (B6)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is r Surface Water (A1)  High Water Table (A2)	Water-Stair Aquatic Fat	ned Leave una (B13)			<u>Secondary Ir</u> Surface Drainage	ndicators (minimum of two required) Soil Cracks (B6) e Patterns (B10)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is r Surface Water (A1) High Water Table (A2) Saturation (A3)	Water-Stair Aquatic Fau True Aquat	ned Leave una (B13) ic Plants	(B14)		<u>Secondary Ir</u> Surface Drainag Dry-Sea	ndicators (minimum of two required) Soil Cracks (B6) e Patterns (B10) son Water Table (C2)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is r Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1)	Water-Stair Aquatic Fau True Aquat Hydrogen S	ned Leave una (B13) ic Plants Sulfide Oc	(B14) lor (C1)		<u>Secondary Ir</u> Surface Drainage Dry-Sea Crayfish	ndicators (minimum of two required) Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8)
Type: Depth (inches): Remarks: <b>YDROLOGY</b> <b>Vetland Hydrology Indicators:</b> Primary Indicators (minimum of one is r Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2)	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized R	ned Leave una (B13) ic Plants Sulfide Oc hizosphe	(B14) lor (C1) res on Liv	0	<u>Secondary Ir</u> Surface Drainage Crayfish S (C3) Saturatio	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9)
Type: Depth (inches): Remarks: <b>YDROLOGY</b> <b>Vetland Hydrology Indicators:</b> Primary Indicators (minimum of one is r Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized R Presence o	ned Leave una (B13) ic Plants Sulfide Oc hizosphe f Reduce	(B14) lor (C1) res on Liv d Iron (C	4)	<u>Secondary Ir</u> Surface Drainage Dry-Sea Crayfish (C3) Sturted	ndicators (minimum of two required) Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Type: Depth (inches): Remarks: <b>YDROLOGY</b> <b>Vetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is r</u> <u>Surface Water (A1)</u> High Water Table (A2) <u>Saturation (A3)</u> Water Marks (B1) <u>Sediment Deposits (B2)</u> Drift Deposits (B3) <u>Algal Mat or Crust (B4)</u>	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized R Presence o Recent Iror	ned Leave una (B13) ic Plants Sulfide Oc hizospher f Reduce n Reductio	(B14) lor (C1) res on Liv d Iron (C on in Tille	4)	Secondary Ir Surface Drainage Dry-Sea Crayfish S (C3) Saturate Stunted C6) X Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Type: Depth (inches): Remarks: YDROLOGY Vetland Hydrology Indicators: Primary Indicators (minimum of one is r 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-Stair Aquatic Fau True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck	ned Leave una (B13) ic Plants Sulfide Oc hizospher of Reduce n Reduction Surface (	(B14) lor (C1) res on Liv d Iron (C on in Tille C7)	4)	Secondary Ir Surface Drainage Dry-Sea Crayfish S (C3) Saturate Stunted C6) X Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1)
Type: Depth (inches): Remarks: <b>YDROLOGY</b> <b>Vetland Hydrology Indicators:</b> Primary Indicators (minimum of one is r 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 Imager	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized R Presence o Recent Iron Thin Muck ry (B7) Gauge or V	ned Leave una (B13) ic Plants Sulfide Oc hizosphei of Reduce n Reductio Surface ( Vell Data	(B14) lor (C1) res on Liv d Iron (C on in Tille C7) (D9)	4)	Secondary Ir Surface Drainage Dry-Sea Crayfish S (C3) Saturate Stunted C6) X Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Type: Depth (inches): Remarks: <b>YDROLOGY</b> <b>Vetland Hydrology Indicators:</b> Primary Indicators (minimum of one is r 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 Imager Sparsely Vegetated Concave Surface	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized R Presence o Recent Iron Thin Muck ry (B7) Gauge or V	ned Leave una (B13) ic Plants Sulfide Oc hizosphei of Reduce n Reductio Surface ( Vell Data	(B14) lor (C1) res on Liv d Iron (C on in Tille C7) (D9)	4)	Secondary Ir Surface Drainage Dry-Sea Crayfish S (C3) Saturate Stunted C6) X Geomor	ndicators (minimum of two required) Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Type: Depth (inches): Remarks: <b>YDROLOGY</b> <b>Vetland Hydrology Indicators:</b> Primary Indicators (minimum of one is r 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 Imager Sparsely Vegetated Concave Surfations: Field Observations:	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized R Presence o Recent Iror Thin Muck ry (B7) Gauge or V ace (B8 Other (Expl	ned Leave una (B13) ic Plants Sulfide Oc hizospher f Reduce n Reductio Surface ( Vell Data lain in Re	(B14) lor (C1) res on Liv d Iron (C on in Tille C7) (D9)	4)	Secondary Ir Surface Drainage Dry-Sea Crayfish S (C3) Saturate Stunted C6) X Geomor	ndicators (minimum of two required) Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Type: Depth (inches): Remarks: <b>YDROLOGY</b> <b>Netland Hydrology Indicators:</b> Primary Indicators (minimum of one is r 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 Imager Sparsely Vegetated Concave Surfations: Surface Water Presen Yes	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck ry (B7) Gauge or V ace (B8 Other (Expl	ned Leave una (B13) ic Plants Sulfide Oc hizospher of Reduce of Reduction Surface ( Vell Data lain in Re	(B14) lor (C1) res on Liv d Iron (C on in Tille C7) (D9)	4)	Secondary Ir Surface Drainage Dry-Sea Crayfish S (C3) Saturate Stunted C6) X Geomor	ndicators (minimum of two required) Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2)
Type: Depth (inches): Remarks: Primary Indicators (minimum of one is r 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 Imager Sparsely Vegetated Concave Surfa Field Observations: Surface Water Presen Yes for the second seco	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck ry (B7) Gauge or V ace (B8 Other (Expl No X Depth (inche	ned Leave una (B13) ic Plants Sulfide Oc hizospher of Reduce of Re	(B14) lor (C1) res on Liv d Iron (C on in Tille C7) (D9) marks)	4) d Soils (C	Secondary Ir Surface Drainage Crayfish S (C3) Saturatio Stunted X Geomor X FAC-Ne	ndicators (minimum of two required) Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Type: Depth (inches): Remarks: <b>YDROLOGY</b> <b>Vetland Hydrology Indicators:</b> Primary Indicators (minimum of one is r 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 Imager Sparsely Vegetated Concave Surfact <b>Field Observations:</b> Surface Water Presen Yes Mater Table Present? Yes M	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck ry (B7) Gauge or V ace (B8 Other (Expl	ned Leave una (B13) ic Plants Sulfide Oc hizospher of Reduce of Re	(B14) lor (C1) res on Liv d Iron (C on in Tille C7) (D9)	4) d Soils (C	Secondary Ir Surface Drainage Dry-Sea Crayfish S (C3) Saturate Stunted C6) X Geomor	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Type: Depth (inches): Remarks: <b>YDROLOGY</b> <b>Vetland Hydrology Indicators:</b> Primary Indicators (minimum of one is r 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 Imager Sparsely Vegetated Concave Surfations: Surface Water Presen Yes for Saturation Present? Yes	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck ry (B7) Gauge or V ace (B8 Other (Expl No X Depth (inche No X Depth (inche	ned Leave una (B13) ic Plants Sulfide Oc hizospher of Reduce of Re	(B14) lor (C1) res on Liv d Iron (C on in Tille C7) (D9) marks)	4) d Soils (C Wetland	<u>Secondary Ir</u> Surface Drainage Crayfish (C3) Saturation Stunted (C3) X Geomor X FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Type: Depth (inches): Remarks: <b>YDROLOGY</b> <b>Vetland Hydrology Indicators:</b> Primary Indicators (minimum of one is r 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 Imager Sparsely Vegetated Concave Surfations: Surface Water Presen Yes for Saturation Present? Yes	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck ry (B7) Gauge or V ace (B8 Other (Expl No X Depth (inche No X Depth (inche	ned Leave una (B13) ic Plants Sulfide Oc hizospher of Reduce of Re	(B14) lor (C1) res on Liv d Iron (C on in Tille C7) (D9) marks)	4) d Soils (C Wetland	<u>Secondary Ir</u> Surface Drainage Crayfish (C3) Saturation Stunted (C3) X Geomor X FAC-Ne	ndicators (minimum of two required) Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)
Type: Depth (inches): Remarks: Primary Indicators (minimum of one is r 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 Imager Sparsely Vegetated Concave Surfate Field Observations: Surface Water Presen Yes for the former of the second seco	Water-Stair Aquatic Fau True Aquat Hydrogen S Oxidized Ri Presence o Recent Iron Thin Muck ry (B7) Gauge or V ace (B8 Other (Expl No X Depth (inche No X Depth (inche	ned Leave una (B13) ic Plants Sulfide Oc hizospher of Reduce of Re	(B14) lor (C1) res on Liv d Iron (C on in Tille C7) (D9) marks)	4) d Soils (C Wetland	<u>Secondary Ir</u> Surface Drainage Crayfish (C3) Saturation Stunted (C3) X Geomor X FAC-Ne	ndicators (minimum of two required Soil Cracks (B6) e Patterns (B10) son Water Table (C2) Burrows (C8) on Visible on Aerial Imagery (C9) or Stressed Plants (D1) phic Position (D2) utral Test (D5)

Project/Site: Anderson Princeton Development		City/County: Princeton	1	Sampling Date: 7/25/2018
Applicant/Owner: Paul and Marijo Anderson			State: IA	Sampling Point: U6 (12)
Investigator(s): Wilson/Brockett		Section, Township, Ra	nge: Sec 14, T 79 N, R	5 E
Landform (hillside, terrace, etc.): Sideslope of Draina	ge Swale	Local relief	(concave, convex, none)	: Convex
Slope (%): 2-5% Lat: 41.655029		Long: -90.348522		Datum: NAD 83
Soil Map Unit Name: Dockery			NWI classif	ication: None
Are climatic / hydrologic conditions on the site typical f	or this time of y	ear? Yes X	No (If no, explain	in Remarks.)
Are Vegetation, Soil, or Hydrology	significant		ormal Circumstances" pre	·
Are Vegetation, Soil, or Hydrology			ded, explain any answers	
SUMMARY OF FINDINGS – Attach site m			· · ·	
Hydrophytic Vegetation Present? Yes	No X	Is the Sampled A	rea	
Hydric Soil Present? Yes	No X	within a Wetland		No X
Wetland Hydrology Present? Yes	No X			
Remarks:				
VEGETATION – Use scientific names of pla				
<u>Tree Stratum</u> (Plot size: )		Dominant Indicator Species? Status	Dominance Test wo	orksheet:
1			Number of Dominant	
2			That Are OBL, FACV	N, or FAC: <u>1</u> (A)
3			Total Number of Dor	
4 5	<u> </u>		Species Across All S	
5		otal Cover	Percent of Dominant That Are OBL, FACV	
Sapling/Shrub Stratum (Plot size:	)			.,
1	·´		Prevalence Index w	/orksheet:
2.			Total % Cover	of: Multiply by:
3			OBL species	0 x 1 = 0
4			· · · · ·	$20   x^2 = 40$
5		otal Cover	FAC species FACU species	$\begin{array}{c} 0 \\ 80 \\ x 4 = \\ 320 \end{array}$
<u>Herb Stratum</u> (Plot size: )	=		UPL species	$\frac{30}{0}$ x 5 = 0
1. Monarda fistulosa	60	Yes FACU		100 (A) 360 (B)
2. Phalaris arundinacea	20	Yes FACW	Prevalence In	dex = B/A = 3.60
3. Helianthus annuus	20	Yes FACU		
4			Hydrophytic Vegeta	
5				or Hydrophytic Vegetation
6 7.	<u> </u>		2 - Dominance 1 3 - Prevalence I	
8				al Adaptations <sup>1</sup> (Provide supporting
9.				rks or on a separate sheet)
10.			Problematic Hyd	drophytic Vegetation <sup>1</sup> (Explain)
	100 =To	otal Cover		soil and wetland hydrology must
Woody Vine Stratum (Plot size:)				isturbed or problematic.
1			Hydrophytic	
2			Vegetation	
		otal Cover	Present? Y	/es No_X
Remarks: (Include photo numbers here or on a sepa	rate sheet.)			

Depth	Matrix		Redo			2		
inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-24	10YR 3/3	100					Loamy/Clayey	
							<u> </u>	
							2	
	Concentration, D=De	pletion, RM=	Reduced Matrix, N	1S=Maske	ed Sand (	Grains.		Pore Lining, M=Matrix.
•	il Indicators:		Candy Clay		(04)			r Problematic Hydric Soils <sup>3</sup> :
	ol (A1)		Sandy Gley		(54)			airie Redox (A16)
	Epipedon (A2)		Sandy Red	• •				ganese Masses (F12)
	Histic (A3) gen Sulfide (A4)		Stripped Ma	. ,				nt Material (F21)
			Dark Surfac		al (E1)			llow Dark Surface (TF12)
	ied Layers (A5)		Loamy Muc Loamy Gley	•	• •			plain in Remarks)
	Muck (A10) ted Below Dark Surfa	000 (A11)	Depleted M	•	. ,			
	Dark Surface (A12)		Redox Dark				<sup>3</sup> Indicators of	hydrophytic vegetation and
	Mucky Mineral (S1)		Depleted D		• •			ydrology must be present,
	Mucky Peat or Peat (	S3)	Redox Dep					sturbed or problematic.
	e Layer (if observed				( )	I		•
10011011		<i>.</i>						
Type								
Type: Depth (ii	nches):		_				Hydric Soil Prese	nt? Yes <u>No X</u>
	nches):						Hydric Soil Prese	nt? Yes <u>No X</u>
Depth (ii Remarks:			_ 				Hydric Soil Prese	nt? Yes <u>No X</u>
Depth (ii Remarks:	OGY		_ 				Hydric Soil Prese	nt? Yes <u>No X</u>
Depth (ii Remarks: IYDROL Wetland H	OGY lydrology Indicators							
Depth (ii Remarks: IYDROL Wetland H Primary In	OGY lydrology Indicators dicators (minimum of						<u>Secondary Inc</u>	dicators (minimum of two require
Depth (ii Remarks: YDROL Vetland H Primary In Surfac	OGY lydrology Indicators dicators (minimum of ze Water (A1)		Water-Stair	ned Leave	· · /		Secondary Ind	<u>dicators (minimum of two require</u> Soil Cracks (B6)
Depth (ii Remarks: IYDROL Vetland H Primary In Surfac High V	OGY lydrology Indicators dicators (minimum of ce Water (A1) Vater Table (A2)		Water-Stair Aquatic Fat	ned Leave una (B13)			<u>Secondary Ind</u> Surface S Drainage	<u>dicators (minimum of two require</u> Soil Cracks (B6) Patterns (B10)
Depth (ii Remarks: IYDROL Vetland H Primary Ind Surfac High V Satura	OGY lydrology Indicators dicators (minimum of ce Water (A1) Vater Table (A2) ation (A3)		Water-Stair Aquatic Fau True Aquati	ned Leave una (B13) ic Plants (	(B14)		Secondary Ind Surface S Drainage Dry-Seas	<u>dicators (minimum of two require</u> Soil Cracks (B6) Patterns (B10) on Water Table (C2)
Depth (ii Remarks: IYDROL Vetland H Primary In Surfac High V Satura Water	OGY lydrology Indicators dicators (minimum of ce Water (A1) Vater Table (A2) ation (A3) Marks (B1)		Water-Stair Aquatic Fau True Aquati Hydrogen S	ned Leave una (B13) ic Plants ( Sulfide Od	(B14) lor (C1)	ving Roots (	Secondary Ind Surface S Drainage Dry-Seas Crayfish I	<u>dicators (minimum of two require</u> Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8)
Depth (ii Remarks: IYDROL Vetland H Primary In Surfac High V Satura Satura Sedim	OGY lydrology Indicators dicators (minimum of the Water (A1) Vater Table (A2) ation (A3) Marks (B1) tent Deposits (B2)		Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized RI	ned Leave una (B13) ic Plants ( Sulfide Od hizospher	(B14) lor (C1) res on Liv	•	<u>Secondary Ind</u> Surface S Drainage Dry-Seas Crayfish I C3) Saturation	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9)
Depth (ii Remarks: IYDROL Vetland H Primary In Surfac High V Satura Satura Sedim Drift D	OGY lydrology Indicators dicators (minimum of the Water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3)		Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Rl Presence o	ned Leave una (B13) tic Plants ( Sulfide Od hizospher of Reduce	(B14) lor (C1) res on Liv d Iron (C4	4)	<u>Secondary Ind</u> Surface S Drainage Dry-Seas Crayfish I C3) Saturation Stunted c	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1)
Depth (ii Remarks: IYDROL Wetland H Primary In Surfac High V Satura Water Sedim Drift D Algal I	OGY lydrology Indicators dicators (minimum of ze Water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) peposits (B3) Mat or Crust (B4)		Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized RI Presence o Recent Iron	ned Leave una (B13) tic Plants ( Sulfide Od hizospher of Reduce n Reductio	(B14) lor (C1) res on Liv d Iron (C4 on in Tille	4)	Secondary Ind Surface S Drainage Dry-Seas Crayfish I C3) Saturation Stunted c ) X Geomorp	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
Depth (ii Remarks: Primary Ind Surfac High V Satura Sedim Drift D Algal I Inon D	OGY lydrology Indicators dicators (minimum of the Water (A1) Water Table (A2) ation (A3) Marks (B1) ment Deposits (B2) Deposits (B3)	one is require	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S	ned Leave una (B13) ic Plants ( Sulfide Od hizospher of Reduce n Reductio Surface ((	(B14) lor (C1) res on Liv d Iron (C4 on in Tille C7)	4)	Secondary Ind Surface S Drainage Dry-Seas Crayfish I C3) Saturation Stunted c ) X Geomorp	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1)
Depth (ii Remarks: Primary Ind Surface High V Satura Water Sedim Drift D Algal I Iron D Inunda	OGY lydrology Indicators dicators (minimum of ce Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) peposits (B3) Mat or Crust (B4) eposits (B5)	one is require	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S Gauge or W	ned Leave una (B13) ic Plants ( Sulfide Od hizospher of Reduce n Reductio Surface (( Vell Data	(B14) lor (C1) res on Liv d Iron (C4 on in Tille C7) (D9)	4)	Secondary Ind Surface S Drainage Dry-Seas Crayfish I C3) Saturation Stunted c ) X Geomorp	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
Depth (ii Remarks: IYDROL Vetland H Primary In Surfac High V Satura Satura Unift D Algal I Iron D Inunda Spars	OGY lydrology Indicators dicators (minimum of ce Water (A1) Vater Table (A2) ation (A3) Marks (B1) nent Deposits (B2) neposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria	one is require	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S Gauge or W	ned Leave una (B13) ic Plants ( Sulfide Od hizospher of Reduce n Reductio Surface (( Vell Data	(B14) lor (C1) res on Liv d Iron (C4 on in Tille C7) (D9)	4)	Secondary Ind Surface S Drainage Dry-Seas Crayfish I C3) Saturation Stunted c ) X Geomorp	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
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Depth (ii Remarks: IYDROL Wetland H Primary Ind Surfac High V Satura Satura Vater Sedim Drift D Algal I Inon D Inunda Spars Surface W	OGY lydrology Indicators dicators (minimum of ee Water (A1) Water Table (A2) ation (A3) Marks (B1) Marks (B1) Mart or Crust (B2) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations:	one is require I Imagery (B7) ve Surface (B	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S Gauge or W 6 Other (Expl	ned Leave una (B13) ic Plants ( Sulfide Od hizospher of Reduce of Reduce of Reductio Surface (( Vell Data lain in Rei	(B14) lor (C1) res on Liv d Iron (C4 on in Tille C7) (D9)	4)	Secondary Ind Surface S Drainage Dry-Seas Crayfish I C3) Saturation Stunted c ) X Geomorp	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) ir Stressed Plants (D1) hic Position (D2)
Depth (ii Remarks: IYDROL Wetland H Primary Ind Surfac High V Satura Satura Vater Sedim Drift D Algal I Inon D Inunda Spars Surface W	OGY lydrology Indicators dicators (minimum of the Water (A1) Vater Table (A2) ation (A3) Marks (B1) tent Deposits (B2) leposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations: ater Presen Yes le Present? Yes	I Imagery (B7) ve Surface (B	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S ) Gauge or W 8 Other (Expl X Depth (inche	ned Leave una (B13) ic Plants ( Sulfide Od hizospher of Reduce n Reductic Surface (( Vell Data lain in Rei es):	(B14) lor (C1) res on Liv d Iron (C4 on in Tille C7) (D9)	4) d Soils (C6	Secondary Ind Surface S Drainage Dry-Seas Crayfish I C3) Saturation Stunted c ) X Geomorp	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
Depth (ii Remarks: IYDROL Vetland H Primary In Surfac High V Satura Satura Drift D Algal I Iron D Inunda Spars Field Obs Surface W Vater Tab Saturation	OGY lydrology Indicators dicators (minimum of the Water (A1) Vater Table (A2) ation (A3) Marks (B1) tent Deposits (B2) leposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations: ater Presen Yes le Present? Yes	I Imagery (B7) ve Surface (B	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized RI Presence o Recent Iron Thin Muck S ) Gauge or W 8 Other (Expl X Depth (inche	ned Leave una (B13) ic Plants ( Sulfide Od hizospher of Reduce n Reductic Surface (( Vell Data lain in Rei es):	(B14) lor (C1) res on Liv d Iron (C4 on in Tille C7) (D9)	4) d Soils (C6	<u>Secondary Ind</u> Surface S Drainage Dry-Seas Crayfish I C3) Saturation Stunted c X Geomorp FAC-Neu	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
Depth (ii Remarks: IYDROL Vetland H Primary In Surfac High V Satura Sedim Drift D Algal I Iron D Inunda Spars Field Obso Surface W Water Tab Saturation includes c	OGY lydrology Indicators dicators (minimum of the Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) leposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations: ater Presen Yes le Present? Yes Present? Yes	I Imagery (B7) ve Surface (B No 2 No 2	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Rl Presence o Recent Iron Thin Muck S Gauge or W Gauge or W Other (Expl X Depth (inche X Depth (inche	ned Leave una (B13) ic Plants ( Sulfide Od hizospher of Reduce n Reductio Surface (( Vell Data lain in Ren es): es):	(B14) lor (C1) res on Liv d Iron (C4 on in Tille C7) (D9) marks)	4) d Soils (C6 Wetland	Secondary Ind Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c ) X Geomorp FAC-Neu Hydrology Present	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
Depth (ii Remarks: IYDROL Vetland H Primary In Surfac High V Satura Sedim Drift D Algal I Iron D Inunda Spars Field Obso Surface W Water Tab Saturation includes c	OGY lydrology Indicators dicators (minimum of we Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) peposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations: ater Presen Yes le Present? Yes Present? Yes apillary fringe)	I Imagery (B7) ve Surface (B No 2 No 2	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Rl Presence o Recent Iron Thin Muck S Gauge or W Gauge or W Other (Expl X Depth (inche X Depth (inche	ned Leave una (B13) ic Plants ( Sulfide Od hizospher of Reduce n Reductio Surface (( Vell Data lain in Ren es): es):	(B14) lor (C1) res on Liv d Iron (C4 on in Tille C7) (D9) marks)	4) d Soils (C6 Wetland	Secondary Ind Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c ) X Geomorp FAC-Neu Hydrology Present	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)
Depth (ii Remarks: IYDROL Vetland H Primary In Surfac High V Satura Sedim Drift D Algal I Iron D Inunda Spars Field Obso Surface W Water Tab Saturation includes c	OGY lydrology Indicators dicators (minimum of we Water (A1) Vater Table (A2) ation (A3) Marks (B1) ment Deposits (B2) peposits (B3) Mat or Crust (B4) eposits (B5) ation Visible on Aeria ely Vegetated Conca ervations: ater Presen Yes le Present? Yes Present? Yes apillary fringe)	I Imagery (B7) ve Surface (B No 2 No 2	Water-Stair Aquatic Fau True Aquati Hydrogen S Oxidized Rl Presence o Recent Iron Thin Muck S Gauge or W Gauge or W S Other (Expl X Depth (inche X Depth (inche	ned Leave una (B13) ic Plants ( Sulfide Od hizospher of Reduce n Reductio Surface (( Vell Data lain in Ren es): es):	(B14) lor (C1) res on Liv d Iron (C4 on in Tille C7) (D9) marks)	4) d Soils (C6	Secondary Ind Surface S Drainage Dry-Seas Crayfish I Saturation Stunted c ) X Geomorp FAC-Neu Hydrology Present	dicators (minimum of two require Soil Cracks (B6) Patterns (B10) on Water Table (C2) Burrows (C8) n Visible on Aerial Imagery (C9) r Stressed Plants (D1) hic Position (D2) tral Test (D5)

# **Appendix: Plant Guide**







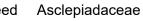


Species Botanical <u>Name</u>	Common Name	Family	Acronym	Native	<u>Physiognomy</u>
Toxicodendron radicans negundo	Poison Ivy	Anacardiaceae	TOXRAN	native	Vine, perennial
Salix nigra	Black Willow	Salicaceae	SALNIG	native	Tree
Bromus inermis	Smooth Brome Brome Grass	Poaceae	BROINE	non-native	e Grass, perennial
Celtis occidentalis	Common Hackberrry	y Ulmaceae	CELOCC	native	Tree

Species					
Botanical	Common				
Name	Name	Family	Acronym	Native	Physiognomy
Helianthus	Sunflower	Asteraceae	HELANN	native	Forb, annual
annuus	Common				

Asclepias syriaca

Common Milkweed



ASCSYR

Forb,perennial native



Platanus occidentalis

American Sycamore

Broadleaf

Cattail



Platanaceae

PLAOCC

native Tree



Typha latifolia





TYPLAT

native

Forb, perennial





Typhaceae





	Common Name	Family	Acronym	Native	Physiognomy
Osmorhiza	Long Sweet-Cicely	Apiaceae	OSMLON	native	Forb, perennial
longistylis	Sweet Root, Anise	·			
Carex vulpinoidea	American Fox	Cyperaceae	CXVULP	native	Sedge, perennial
	Sedge				
Laportea canadensis	Wood Nettle Canadian Nettle, Stinging nettle	Urticaceae	LAPCAN	native	Forb, perennial
Juniperus virginiana	Red Cedar	Cupressacea	eJUNVIR	native	Tree





Species Botanical <u>Name</u>	Common Name	Family	Acronym	Native P	hysiognomy
Zea mays	Corn	Poaceae	ZEAMAY	non-native	Grass,annual
Ribes americanum	Wild Black Currant	Saxifragaceae	RIBAME	native	Shrub,
Monarda didyma	Oswego Tea	Lamiaceae	MONDID	non-native	Forb, perennial
	earl Millet, Millet reen Bristlegrass	Poaceae	SETGLA	non-native	Grass, annual

Species Botanical <u>Name</u>	Common Name	Family	Acronym	Nativity	Physiognomy
Ulmus rubra	Slippery Elm Red Elm	Ulmaceae	ULMRUB	native	Tree
-				/	

Parthenocissus





PARQUI

Vitaceae

native

Vine,perennial





Tree

Morus alba



White Mulberry



Pastinaca sativa

Parsnip

Apiaceae

PASSAT

non-native

Forb, perennial

Species Botanical	Common				
Name	Name	Family	Acronym	Nativity	Physiognomy
Monarda fistulosa	Wild Bergamont Horsemint	Lamiaceae	MONFIS	native	Forb, perennial