Wetland Delineation Report



Proposed Good Harvest Market

City of Waukesha, Waukesha County, Wisconsin

RASN Project No. 1130220

December 12th, 2013

Wetland Delineation Report

Proposed Good Harvest Market City of Waukesha, Waukesha County, Wisconsin

Prepared by:

Heather Patti, PWS Lead Ecologist/Project Manager

Reviewed by:

Tina Myers, PWS Ecologist/Project Manager

R.A. Smith National, Inc. 16745 W. Bluemound Road, Suite 200 Brookfield, WI 53005-5938 (262) 781-1000

Prepared for:

Good Harvest Market 1850 Meadow Lane Pewaukee, WI 53072

December 12th, 2013

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December 12th, 2013

INTRODUCTION

R.A. Smith National, Inc. (RASN) is pleased to provide this Wetland Delineation Report for an approximately 5.71-acre property along Meadow Lane in the City of Waukesha, Waukesha County, Wisconsin (Appendix 1, Figure 1). The wetland delineation was requested by Good Harvest Market.

The vacant 5.71-acre property is specifically located at the end of Meadow Lane near the Meadow Lane and Marshview Street intersection in the NW ¼ of Section 28, Township 7 North, Range 19 East (Appendix A, Figure 1). The property is bordered by vacant lands (wetland) to the south and west, Meadow Lane and commercial development to the north and residential & commercial development to the east.

The purpose of the wetland delineation was to identify the proximity and extent of wetlands within the property in association with a potential site development project. One wetland, hereby referred to as "W-1", was identified along the western and southern portion of the property which is associated with an un-named tributary to the Upper Fox River. The delineation is presented here in terms of qualifications, methodology, results, and conclusions.

STATEMENT OF QUALIFICATIONS

RASN provides wetland and ecological services including wetland delineation, assessment, permitting, and restoration. RASN ecologists offer a wide variety of technical experience in the natural resource field, and have successfully completed projects throughout the Midwestern and Northeastern United States.

Ms. Heather Patti, PWS and Ecologist with RASN, earned a Masters Degree in Botany and a minor in Ecology from North Carolina State University. Ms. Patti is experienced with a variety of aspects of ecological restoration, including wetland, mixed hardwood, and prairie restoration. She provides over 15 years of experience in wetland delineation, assessment, and mitigation. Ms. Patti attended the Basic & Advanced Wetland Delineation course offered by UW-LaCrosse in 2005 & 2013, became a WDNR Assured Wetland Delineator in 2009, attends the annual Critical Methods in Wetland Delineation refresher course in Madison, and recently attended the Hydric Soil Identification Course offered by UW-LaCrosse in 2011.

METHODOLOGY

The wetland delineation consisted of a map review followed by fieldwork to delineate the on-site wetlands. The fieldwork documented the presence and absence of hydrophytic vegetation, wetland hydrology, and hydric soil indicators outlined in the *U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual*, Technical Report Y-87-1 (1987) and subsequent guidance documents (USACE 1991, 1992), Guidelines for Submitting Wetland Delineations in Wisconsin to the St. Paul District Corps of Engineers (USACE 1996), the *Basic Guide to Wisconsin's Wetlands and Their Boundaries* (Wisconsin Department of Administration Coastal Management Program, 2005), and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral & Northeast Region, Version 2.0*, the guide for the USDA Natural Resources Conservation Services (NRCS) Field Indicators of Hydric Soils (version 7.0) in the United States, and in general accordance with Wisconsin Department of Natural Resources (WDNR) guidelines. The Northcentral & Northeast Regional USACE supplement was recently drafted for the purpose of bringing the existing 1987 Manual up to date for wetland delineations. This supplement is intended to be used as an additional guidance to the 1987 Manual, and is not its replacement.

Prior to conducting fieldwork, RASN reviewed several maps for the property, including the United States Geological Survey (USGS) 7.5-minute quadrangle topographic map (Appendix 1, Figure 1), the NRCS Soil Survey Report for Waukesha County (Appendix 1, Figure 3), the Southeastern Wisconsin Regional Planning Commission (SEWRPC) historical aerial photographs dated 2000, 2005, and 2010 (Appendix 1, Figures 4A-C), the Wisconsin Wetland Inventory Map (Appendix 1, Figure 5), and NOAA's Advanced Hydrologic Prediction Service Map (Appendix 1, Figure 6).

Areas having wetland field indicators were evaluated in the field by RASN wetland scientist Ms. Heather Patti during a site visit on October 16th, 2013 and photo documented (Appendix 2). According to guidance described in the 1987 Manual and Northcentral & Northeast Regional Supplement, areas that under normal circumstances reflect a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology are considered wetlands. RASN collected field data at six (6) sample points, using a transect and data point approach following the USACE Northcentral/Northeast Supplement wetland determination forms (Appendix 3). A sharpshooter shovel was used to dig the soil pits and to refine the wetland boundary. The delineated wetland areas were flagged and then surveyed by Landmark Engineering Sciences, Inc. surveyors. Pink wire flags with the words "Wetland Delineation" were used to stake the wetland boundaries and data point locations. The wetland boundaries and data point locations are depicted on Appendix 1, Figure 2. Observations were made at representative sample points along transects extending through upland and wetland areas.

RESULTS

The USGS topographic map (Appendix 1, Figure 1) depicts the location of the property and the Wetland Boundary Map (Appendix 1, Figure 2) depicts the delineated wetland boundaries overlaid onto a 2-foot contour base map. In general, site drainage is southwesterly down a steep slope towards the wetland and its associated tributary. As shown on Figure 2, the elevations within the site range from 890 feet msl at the highest point to 880 feet msl near the tributary which sits slightly lower than the wetland boundary.

According to the NRCS Soil Survey Report of Waukesha County, Wisconsin (Appendix 1, Figure 3), mapped soils within the parcel consist of Hochheim loam with 2-6% slopes (HmB2), Hochheim loam with 12-20% slopes (HoD3) and Houghton muck (HtA). Of these soil types, the NRCS hydric soil list classifies Houghton muck as a very poorly drained, hydric soil. In general, the dominant mapped soil type within W-1 was Houghton muck, although the wetland also extended into the Hochheim loam soil unit.

A review of aerial photographs from the years 2000, 2005, and 2010 (Appendix 1, Figures 4-C) was completed by RASN prior to the site visit. During this timeframe, there were essentially no changes to the land use within the project area other than a gradual increase in vegetative density. The un-named tributary to the Upper Fox River is evident on each of the aerials; at the time of the site visit it appeared to be approximately 8 feet wide with a defined bed and bank.

The Wisconsin Wetland Inventory (WWI) Map (Appendix 1, Figure 5) depicts two different wetland cover types within the vicinity of W-1, symbolized by T3/E2K, meaning Forested (T), Broad-leaved deciduous (3), Emergent (E), narrow-leaved persistent (2), palustrine (K) and S3/E2K, meaning Scrub/shrub (S), Broad-leaved deciduous (3), Emergent (E), narrow-leaved persistent (2), palustrine (K). The wetland cover types depicted on the WWI are in the same approximate location as W-1 and its associated tributary.

Recent precipitation data are used to assess the current season's hydrology. Precipitation data can help make determinations as to whether or not the wetland hydrology criterion has been met at recorded data points. Rainfall data recorded by the local WETS table and the National Weather Service's Advanced Hydrologic Prediction Service (AHPS) were used to evaluate the hydrology of the site prior to the October 16th site visit (Appendix 1, Figure 6). According to the local WETS table (Oconomowoc 1 SW, WI6200), average precipitation in the

Waukesha County area for the three months prior to the October 16th site visit (July through September) is 12.54 inches. Average rainfall for the month of September is typically 3.74 inches. Prior to the mid-October site visit, a total of 1.62 inches was recorded during the first two weeks of October according to Weather Channel's monthly data. Approximately 0.43 inches of rain was recorded within the week prior to the site visit. According to the AHPS map (Appendix 1, Figure 6), the late summer – early fall precipitation in the City of Waukesha for the October visit was approximately 2-4 inches below the normal range. This suggests that the surface or near-surface hydrology at the time of the October 16th, 2013 site visit was drier than normal for this time of year. The drier than normal conditions were noted on the datasheets in Appendix 3.

Field Investigation

All areas on the above-mentioned maps as being wetland or having wetland characteristics were evaluated in the field. A total of six (6) data points were examined and one (1) wetland totaling 1.2 acres (52,272 square feet) was delineated and surveyed (Appendix 1, Figure 2). Data points in both upland and wetland areas were sampled in the field to determine the wetland boundaries. The data sheets were compiled and are included in Appendix 3. The following is a description of the delineated wetland.

Wetland 1 – Shallow Marsh / Fresh (wet) Meadow / Lowland Hardwoods (Riparian)

Wetland 1 (W-1) is approximately 1.2 acre (52,272 square feet) in size and is associated with an un-named tributary to the Upper Fox River (Appendix 1, Figure 2). This wetland continues off site towards the west and south. The dominant plant community within W-1 is shallow marsh dominated by cattail species (*Typha* spp.), although portions of the outermost perimeter also included fresh (wet) meadow & lowland hardwoods dominated by reed canary grass (*Phalaris arundinacea*) with scattered box elder (*Acer negundo*), cottonwood (*Populus deltoides*) and green ash (*Fraxinus pennsylvanica*). The immediate adjacent upland consists mostly of disturbed old field dominated primarily by young box elder, Kentucky blue grass (*Poa pratensis*), Canada goldenrod (*Solidago canadensis*), Queen Anne's lace (*Daucus carota*), and other old-field weeds.

Hydrology in W-1 is sustained by surfacewater runoff from the surrounding landscape and baseflow of the unnamed tributary. Photo #8 (Appendix 3) depicts the tributary as observed near Meadow Lane. Physical on-site evidence of wetland hydrology within W-1 included inundation, high water table, saturation in the upper 12 inches, water stained leaves, drainage patterns, microtopographic relief, and a positive FAC-Neutral test (see DP-2, DP-4 and DP-6 in Appendix 3).

In general, there was a steep topographic break between the upland and wetland along most of the delineated boundary. Topography sloped away from the wetland towards the east and north, and the transition in vegetation was apparent as cattail marsh and reed canary grass-dominated fresh (wet) meadow transitioned to old-field.

According to the NRCS Soil Survey of Waukesha County, Houghton muck (HtA) is the dominant mapped soil type within W-1. As mentioned earlier, the NRCS hydric soil list classifies Houghton muck as a very poorly drained, hydric soil. Three wetland data points were taken within W-1 (Appendix 3) within representative shallow marsh, lowland hardwoods and fresh (wet) meadow plant communities along the wetland boundary. The wetland soil samples resembled the typical profile descriptions of Houghton muck; all contained hydric soil characteristics that met the A1 (Histosol) or F6 (Redox dark Surface) NRCS Hydric Soil Indicators.

CONCLUSION

Based on the wetland assessment completed by RASN, one (1) wetland area associated with an un-named tributary to the Upper Fox River was identified on the property. A total of 1.2 acres (52,272 square feet) of wetland was delineated and surveyed by Landmark Engineering Sciences, Inc. surveyors.

This report is limited to the delineation of state and/or federally regulated wetlands on the property. However, there may be other regulated environmental features within the property (e.g., historical, archaeological, threatened or endangered species). Federal, state and/or local units of government may have regulatory authority to restrict land use within or close in proximity to other environmental features. For example, Wisconsin Adm. Code NR 151.12 requires buffers or a "protective area" from the top of the channel of streams, rivers and lakes, or at the delineated boundary of wetlands. The jurisdictional decision on the width of wetland buffers rests with the WDNR. The local unit(s) of government may also have protective area buffers from wetlands than that imposed under NR 151.

The U.S. Army Corps of Engineers has regulatory authority over waters of the U.S. including adjacent wetlands, and the WDNR has regulatory authority over wetlands, navigable waters, and adjacent lands under Ch. 30 Wisconsin State Statues, Act 6, and NR 103 Wisconsin Administrative Code. Local jurisdictions may also have regulations through zoning ordinances. Our client, Good Harvest Market, respectfully requests verification of the delineated wetlands by the USACE.

APPENDICES

Appendix 1: Figures

Figure 1: USGS Map/Site Location Map

Figure 2: Wetland Boundary Map (Landmark Engineering Sciences, Inc)

Figure 3: NRCS Soil Survey of Waukesha County
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Appendices

Appendix 1: Figures

Appendix 2: Site Photographs

Appendix 3: Wetland Determination Data Forms – Northcentral/Northeast Region

Appendix 1: Figures

Figure 1: USGS Map/Site Location Map

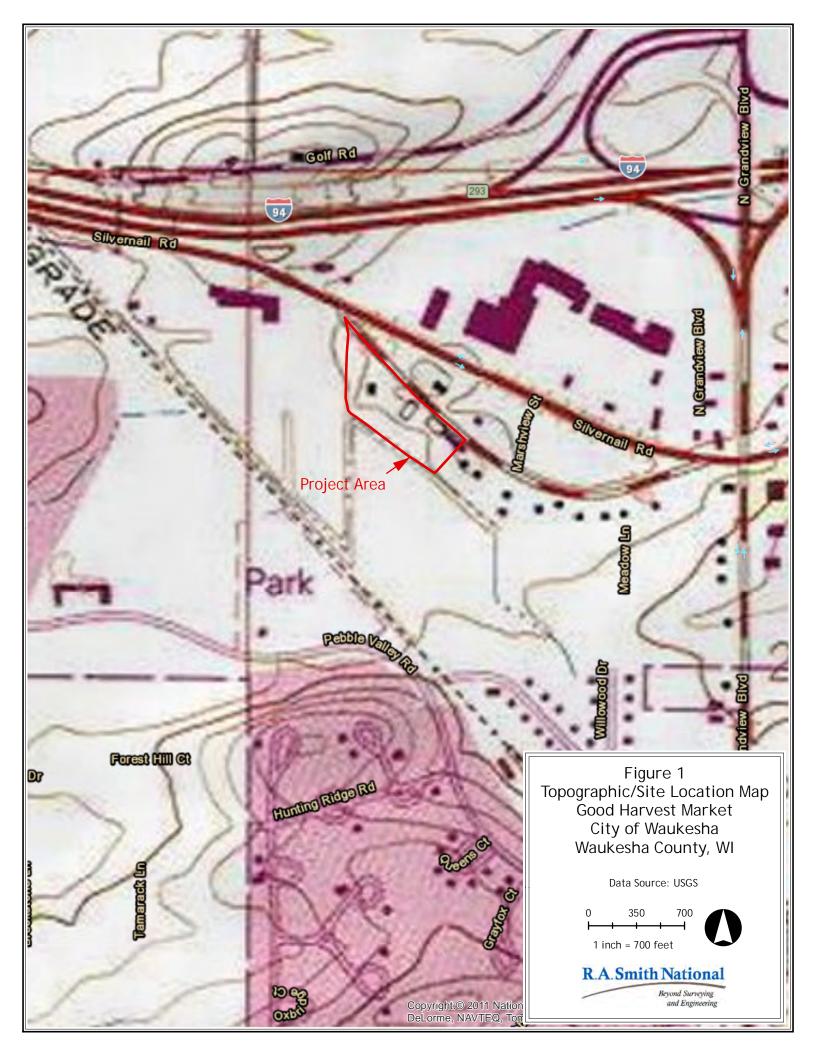
Figure 2: Wetland Boundary Map (Landmark Engineering Services, Inc)

Figure 3: NRCS Soil Survey of Waukesha County

Figures 4A-C: Aerial Photographs (2000, 2005, 2010)

Figure 5: Wisconsin Wetland Inventory Map

Figure 6: 90-day Departure from Normal Precipitation Map



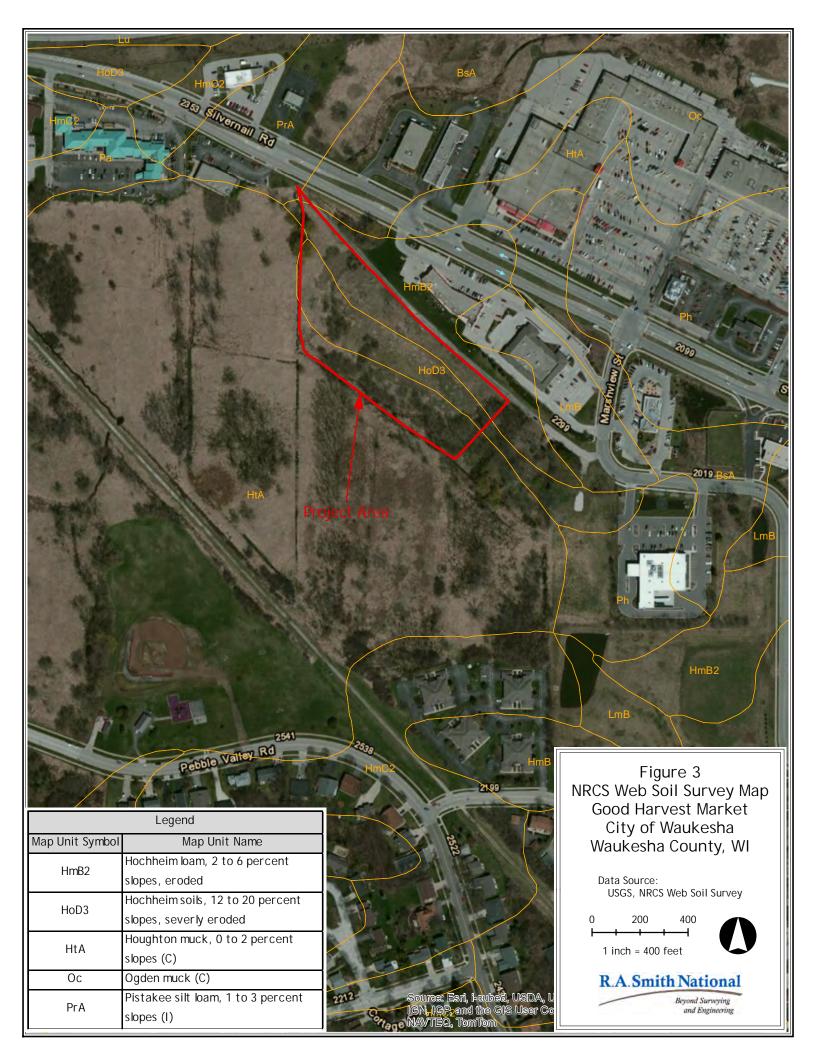


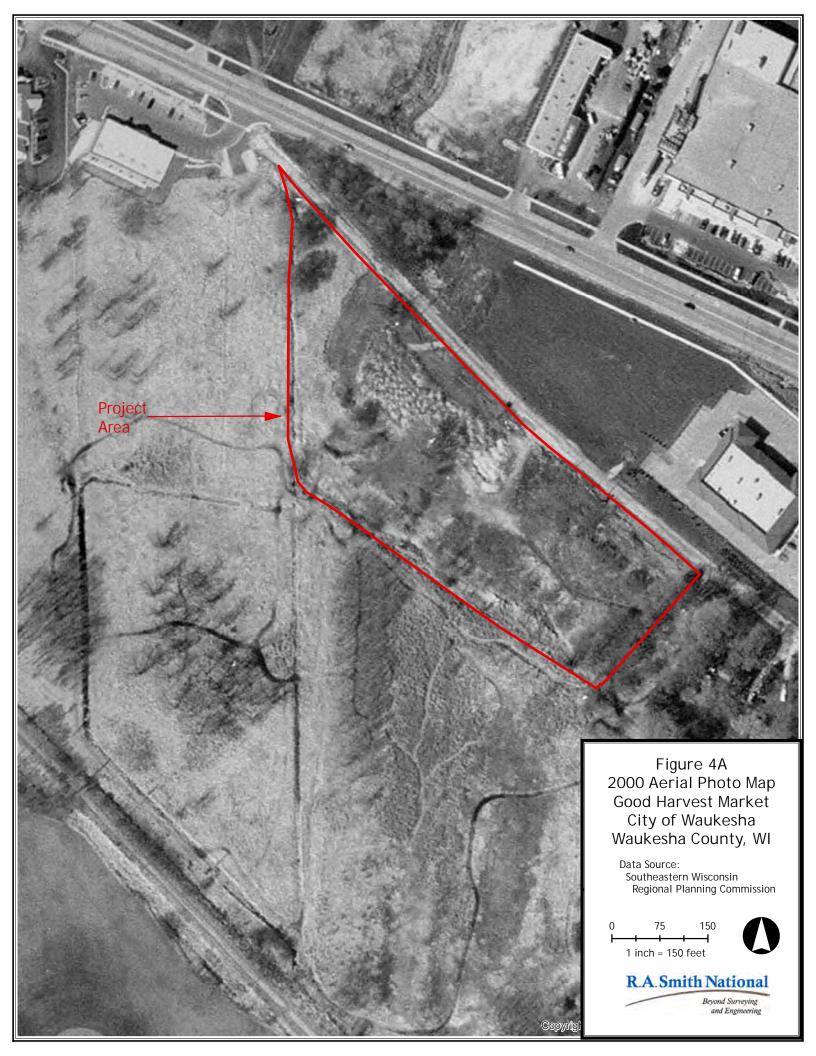
GOOD HARVEST MARKET

MEADOW LANE
WAUKESHA, WI 53188

ENGINEERING SCIENCES, INC.

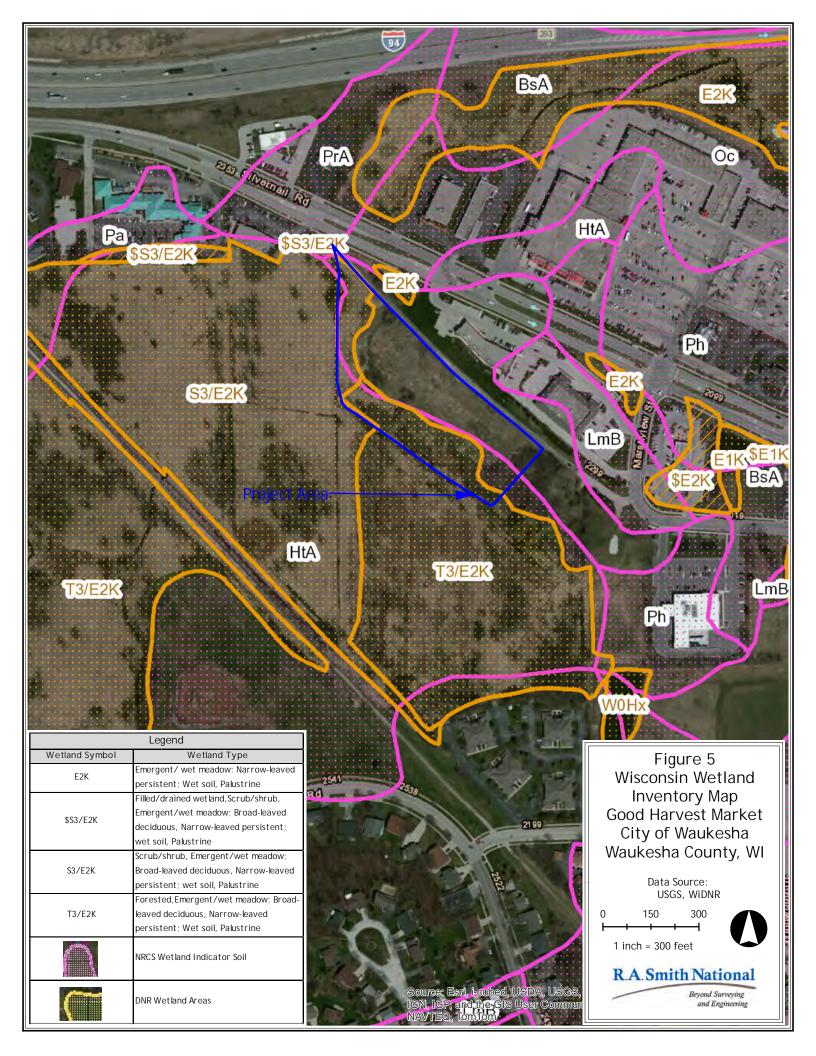
3021 MINOT LANE, SUITE 200, WAUKESHA, WI 53188-4453 PHONE: 414-719-2769



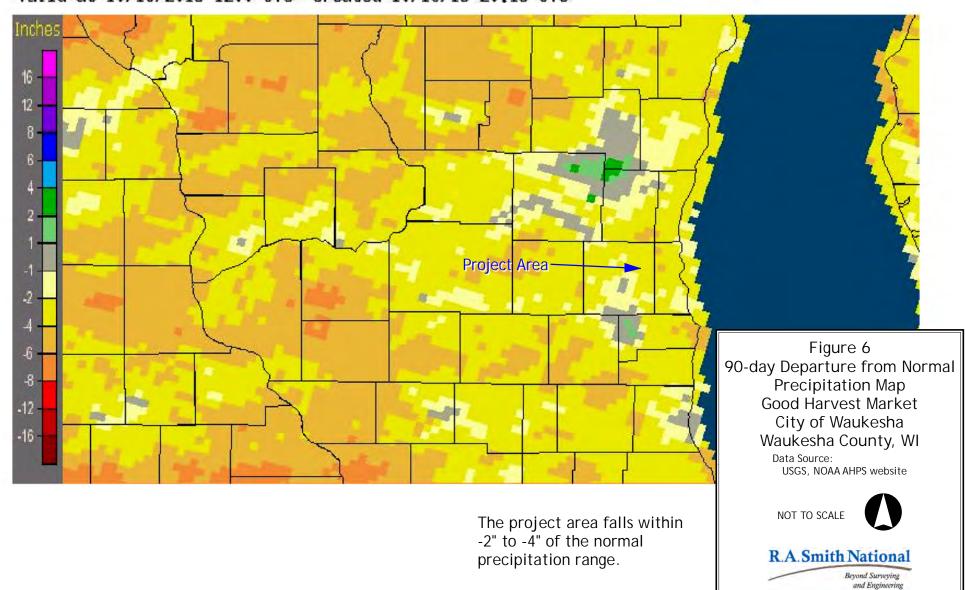








Milwaukee/Sullivan, WI (MKX): Current 90-Day Departure from Normal Precipitation Valid at 10/16/2013 1200 UTC- Created 10/16/13 20:13 UTC



Appendix 2:

Site Photographs



Photograph 1 (10/16/2013): General view of W-1, facing west.



Photograph 2 (10/16/2013): View of upland data point T-1 DP-1, facing downslope towards the wetland. A 20-30% slope is evident here along the wetland boundary.



Photograph 3 (10/16/2013): View of wetland data point T-1 DP-2, facing west.



Photograph 4 (10/16/2013): Another general view of W-1, facing northwest across the wetland (and off-site).



Photograph 5 (10/16/2013): View of transect T-2, facing downslope towards W-1. A 20-40% slope is evident here along the wetland boundary.



Photograph 6 (10/16/2013): Another general view of W-1, facing upslope towards the on-site uplands. The wetland is dominated by reed canary grass, box elder and garlic mustard in this area.



Photograph 7 (10/16/2013): View of data transect T-3, facing west towards W-1.



Photograph 8 (10/16/2013): View of the un-named Upper Fox tributary, which runs along the western property line then turns southeast.

Appendix 3:

Wetland Determination Data Forms – Northcentral/Northeast Region

Project/Site:	Waukesha G	ood Harvest Market		City/County: Waukesha/Waukesh	18	Sampling Date: October 16, 2013
Applicant/Owner:	Good Harves			State: WI		Sampling Point: T-1 DP-1 upl
Investigator(s):	Heather Patti	, PWS		Section, Township,	Range:	NW 1/4 Sec 28, T7N R19E
Landform (hillslope, to	errace, etc.):	footslope		Local relief (concave, convex, none):	Ü	convex
Slope % 30%	,	Lat:	Long	<u> </u>	Datum:	
Soil Map Unit Name:		Hochheim soils	(HoD3), 12-20% slopes, non-hydr	ic	WWI Class	ification: none mapped
·		the site typical for this tin		Yes No *X		(if no, explain in Remarks)
Are Vegetation	N Soi	- · ·	•	Are "Normal Circumstan	nces" presei	, , ,
Are Vegetation	N Soi			(if needed, explain any a		
-						·
SUMMARY OF I	FINDINGS	- Attach site map	showing sampling point lo	ocations, transects, important	teatures	, etc.
Hydrophytic Vegetation	on Present?	Yes	No X	Is the Sampled Area		
Hydric Soil Present?		Yes	No X	within a Wetland?		Yes NoX
Wetland Hydrology Pr	resent?	Yes	NoX	If yes, optional wetland s	site ID:	
Remarks:	*Current cli	matic conditions are	2-4 inches drier than normal	for this time of year (see AHPS m	ap, Figur	e 6, Appendix 1)
	There is a s	trong topo break be	tween the upland and wetland	d boundary.		
HYDROLOGY			_			
Wetland Hydrology	Indicators:				Secondary	Indicators (minimum of two required)
		s required; check all that	apply)	·	-	Surface Soil Cracks (B6)
Surface Water (A	A1)		Water-Stained Leaves (B9)	-		Drainage Patterns (B10)
High Water Tabl	,	-	Aquatic Fauna (B13)	-		Moss Trim Lines (B16)
Saturation (A3)			Marl Deposits (B15)			Dry-Season Water Table (C2)
Water Marks (B1	1)		Hydrogen Sulfide Odor (C1)			Crayfish Burrows (C8)
Sediment Depos	sits (B2)		Oxidized Rhizospheres on Living F	Roots (C3)		Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B	33)		Presence of Reduced Iron (C4)	<u>-</u>		Stunted or Stressed Plants (D1)
Algal Mat or Crus	ıst (B4)		_Recent Iron Reduction in Tilled So	ils (C6)		_ Geomorphic Position (D2)
Iron Deposits (B			Thin Muck Surface (C7)	-		Shallow Aquitard (D3)
Inundation Visible	-		Other (Explain in Remarks)	-		Microtopographic Relief (D4)
Sparsely Vegeta	ated Concave Su	ırface (B8)		-		_FAC-Neutral Test (D5)
Field Observations:						
Surface Water Prese	ent? Y	es No X	Depth (inches):			
Water Table Present		es No X	Depth (inches):	-		
Saturation Present?		es No X	Depth (inches):	Indicators	of Wetland	d Hydrology Present? Yes No X
(includes capillary frin	ige)					
USGS Topograph Wetland Inventor	hic Map (Figu ry (Figure 5), a	re 1), NRCS Soil Sur and AHPS precipitati		ailable: d 2010 aerial photographs (Figure	es 4A-C), \	Visconsin
Remarks: No w	retland hydro	logy indicators are p	resent.			

olute % Dominant Cover Species			
	Indicator Status	Dominance Test Worksheet:	
		Number of Dominant Species	
65 Y	FAC	That Are OBL, FACW, or FAC:	(A)
		Total Number of Dominant	
		Species Across All Strata:	(B)
			33% (A/B)
65 = Total Cover		That Ale OBL, FACW, OF FAC.	(A/B)
		Prevalence Index Worksheet:	
		Total % Cover of:	Multiply by:
		OBL species	x 1 =
. v	LIDI	FACW species	x 2 =
		FACIL species	x 3 = x 4 =
	· · · · · · · · · · · · · · · · · · ·	UPL species	x 5 =
		Column Totals:	(A) (B)
		Prevalence Index B/A =	
5 = Total Cover		Hydronhytic Vegetation Indicators:	
- Total Covel			outic Vegetation
			-
			and the second s
		Morphological Adaptat	ions ¹ (Provide supporting
100 Y	UPL		
<u>5</u> N	<u>FAC</u>	Problematic Hydrophyl	ic Vegetation¹ (Explain)
		1 Indicators of hydric soil and wetland hydric	Irology must
			==
		, ,	
		Definitions of Vegetation Strata:	
		To a Was I state 0 is (7.0 sec) seems	and the Proceedings
		at brest height (DBH), regardless of heig	
		Sapling/shrub - Woody plants less than	3 in. DBH
105 = Total Cover		and greater than 3.28 ft (1m) tall.	
		` ' '	
		of size, and woody plants less than 3.28	t. tali.
		Woody vines - All woody vines greater t	nan 3.28 ft. in
		height.	
		Hydrophytic	
• Total Cavar			No. V
- Total Cover		riesent?	No X
	5 Y 5 = Total Cover 100 Y 5 N	5 Y UPL 5 = Total Cover 100 Y UPL 5 N FAC 105 = Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index Worksheet: Total % Cover of: OBL species FACW species FACU species FACU species Column Totals: Prevalence Index B/A = Hydrophytic Vegetation Indicators: Rapid Test for Pydrophytic Dominance Test is >50 Prevalence Index is 5: Morphological Adaptati data in Remarks or c Problematic Hydrophyt Indicators of hydric soil and wetland hyc be present, unless disturbed or problem Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or mo at brest height (DBH), regardless of height Sapling/shrub - Woody plants less than and greater than 3.28 ft (1m) tall. Herb - All herbaceous (non-woody) plants of size, and woody vines greater the height. Hydrophytic Vegetation

SOIL Sampling Point: T-1 DP-1 upl

Duefile December	(December to the depth was				-h		`		
Profile Description	n: (Describe to the depth need	iea to aocum	ient the indicator	or confirm the	absence of i	naicators.))		
Depth	Matrix			Redox Feature	es				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
					турс	LOC	·		
0 - 7	10YR 3/2	100					silt loam	small - med cobb	ole throughout
7-14	10 YR 4/3	100			-		silty cl loam		
14-18+	10 YR 4/3	90	10 YR 5/6	10	С	<u>м</u>	silty cl loam		
						<u> </u>	<u>only or rouni</u>		
¹ Type: C=Concentr	ration, D=Depletion, RM=Reduce	ed Matrix, CS=	Covered or Coate	ed Sand Grains.		² L	ocation: PL=Pore Lining,	M=Matrix	
Hydric Soil Indicat								roblematic Hydric So	ils³:
Histosol (A1)			Plolyvalue Below S	urface (SS) (I DE	D			ck (A10) (LRR K, L, M	
				uriace (So) (LRF	· r				•
Histic Epipedo			/ILRA 149B)					airie Redox (A16) (LR	
Black Histic (A	(3)	T	hin Dark Surface	(S9) (LRR R, ML	RA 149B)		5cm Mud	cky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfi	ide (A4)		oamy Mucky Mine	eral (F1) (LRR K.	L)		Dark Sur	face (S7) (LRR K, L)	
Stratified Layer			oamy Gleyed Mat		_,			e Below Surface (S8)	(IDD KI)
	w Dark Surface (A11)		Depleted Matrix (F	,				k Surface (S9) (LRR K	
Thick Dark Sur	rface (A12)	F	Redox Dark Surfa	ce (F6)			Iron-Man	iganese Masses (F12)	(LRR K, L, R)
Sandy Mucky I	Mineral (S1)		epleted Dark Sur	face (F7)			Piedmon	t Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed			Redox Depression	, ,				oodic (TA6) (MLRA 14	
			redux Depression	S (FO)					47, 143, 1486)
Sandy Redox (ent Material (TF2)	
Stripped Matrix	x (S6)						Very Sha	allow Dark Surface (TF	12)
Dark SURface	(S7) (LRR R, MLRA 149B)						Other (E	xplain in Remarks)	
3 Indicators of hydro	ophytic vegetation and wetland h	ovdrology mus	t he present unle	ss disturbed or nr	ohlematic				
Restrictive Layer (iyarology mas	t be present, union	so distarbed or pr	obiematic.				
Type: n/a	(II ODSAIVAU).								
Depth (inches)	: <u>n/a</u>						Hydric Soil Present?	Yes	No X
Damada The	bydria agil aritarian bag	not boon m							
Remarks: The	e hydric soil criterion has i	not been m	et.						
I									
I									
1									
1									
I									
l									
<u> </u>									

Project/Site:	Waukesha G	ood Harvest Mark	cet		City/0	County: Waukesha/V	Vaukesha	Sampling	Date: October 16, 2	. 013
Applicant/Owner:	Good Harves	t Market, Inc				State:	WI		Sampling Point:	T-1 DP-2 wtd
Investigator(s):	Heather Patt	, PWS				Section, To	wnship, Range	e: NW 1/4 S	Sec 28, T7N R19E	
Landform (hillslope,	terrace, etc.):	stream ter	race		Local relief (concave, convex, n	one):	concave		
Slope % n/a		Lat:		Long	g:		Datun	n:		
Soil Map Unit Name	: <u> </u>		Houghton muc	k (HtA), hydric			WWI	Classification:	T3/E	Ξ2K
Are climatic / hydrolo	ogic conditions of	n the site typical fo	r this time of year	r?	Yes	No	*X	(if no, ex	plain in Remarks)	
Are Vegetation	<u>N</u> S	Soil <u>N</u> or	Hydrology	N significantly disturbed	ed?	Are "Normal Circ	umstances" p	resent?	Yes	X No
Are Vegetation	S	Soil <u>N</u> or	Hydrology	N naturally problemat	tic?	(if needed, explai	n any answers	s in Remarks)		
SUMMARY OF	FINDINGS -	Attach site	map showin	g sampling point	locations, tı	ansects, impo	ortant feat	ures, etc.		
Hydrophytic Vegetat	tion Present?		Yes X	No	_	Is the Sampled A	rea			
Hydric Soil Present?	?		Yes X	No	_	within a Wetland?	?		Yes X	No
Wetland Hydrology F	Present?		Yes X	No	_	If yes, optional we	etland site ID:		W-1	
	All three we	etland criteria h	nave been me	t.						
HYDROLOGY										
Wetland Hydrology							Secon		minimum of two requ	uired)
Primary Indicators (r	minimum of one i	s required; check a	all that apply)					Surface S	Soil Cracks (B6)	
X Surface Water	. ,			er-Stained Leaves (B9)					Patterns (B10)	
X High Water Tab	. ,			atic Fauna (B13)					m Lines (B16)	
X Saturation (A3) Water Marks (B				Deposits (B15) rogen Sulfide Odor (C1)					son Water Table (C2) Burrows (C8)	•
Sediment Depo	•			ized Rhizospheres on Liv	vina Roots (C3)				n Visible on Aerial Im	nagery (C9)
Drift Deposits (I				ence of Reduced Iron (C					or Stressed Plants (D	
Algal Mat or Cri	. ,			ent Iron Reduction in Tille	ed Soils (C6)				phic Position (D2)	
Iron Deposits (E		(5.7)		Muck Surface (C7)					Aquitard (D3)	
	ble on Aerial Imag		Othe	er (Explain in Remarks)			— ×		ographic Relief (D4)	
Sparsely veget	tated Concave Si	illace (bo)						rac-net	itral Test (D5)	
Field Observations										
Surface Water Prese		Yes X		epth (inches): ~1"	_					
Water Table Present Saturation Present?		Yes X Yes X		epth (inches): surface epth (inches): surface		Ind	licators of We	etland Hydrolog	y Present? Yes	X No
(includes capillary fri		100 <u>X</u>		ppin (meneo).	<u>^</u>			outaila riyarolo _t	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
USGS Topograp Wetland Invento	ohic Map (Figu ory (Figure 5),	ire 1), NRCS So and AHPS pred	oil Survey (Fig cipitation map		and 2010 aeria			·		
Remarks: Wet	land hydrolog	y criterion has	been met. Th	nis wetland is assoc	ciated with the	un-named Upp	er Fox trib	utary to the s	outh.	

VEGETATION - Use scientific nan	nes for plants.			Sampling Point: T-1 DP-2 wtd
Tree Stratum (Plot size: n/a)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet:
1. 2.				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
3. 4.				Total Number of Dominant Species Across All Strata: 2 (B)
5 6				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
7	0 :	Total Cover		,
				Prevalence Index Worksheet:
Sapling/Shrub Stratum (Plot size: 15'R)			OBL species
1. <i>Frangula alnus</i>		Y	FAC	FAC species x 3 =
2				FACU species
3. 4.				Column Totals: (A) (B)
5. 6.				Prevalence Index B/A =
7.		T-4-1 O		Hudrophytis Vanatation Indicators
		Total Cover		Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is >50% Prevalence Index is ≤ 3.0¹
Herb Stratum (Plot size: 5'R 1. Typha x glauca	100	Υ	OBL	Morphological Adaptations ¹ (Provide supporting data in Remarks or on separate sheet)
2. Phalaris arundinacea	20	N	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3				
4 5				1 Indicators of hydric soil and wetland hydrology must
6. 7.				be present, unless disturbed or problematic.
8. 9.				Definitions of Vegetation Strata:
10.				
11. 12.				Tree - Woody plants 3 in. (7.6 cm) or more in diameter at brest height (DBH), regardless of height.
13.		Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall.
				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
Woody Vine Stratum (Plot size: n/a	<u>)</u>			or ones, and mossly plants less than ones in dam.
1.				Woody vines - All woody vines greater than 3.28 ft. in height.
3.				Hydrophytic
4.		_ T-t-1 O		Vegetation
		= Total Cover		Present? Yes X No
Remarks: (Include photo numbers here or on	a separate sheet.)			
The hydrophytic vegetation criterior	n is met. This is a s	shallow mars	h plant commu	nity.

SOIL Sampling Point: T-1 DP-2 wtd Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Color (moist) (inches) Color (moist) Type¹ Texture 0-20+ N 2.5/0 100 muck Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils³: X Histosol (A1) Plolyvalue Below Surface (S8) (LRR R 2cm Muck (A10) (LRR K, L, MLRA 149B) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5cm Mucky Peat or Peat (S3) (LRR K, L, R) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Loamy Gleyed Matrix (F2) Plolyvalue Below Surface (S8) (LRR K L) Stratified Layers (A5) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (TF2) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark SURface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): n/a Yes __*X Depth (inches): n/a Hydric Soil Present? No Remarks: The hydric soil criterion is met. *Redox features are likely masked by the very dark matrix color.

Project/Site:	Waukesha Good	l Harvest Market		City/County: Waukesha/Waukesha Sampling Date: October 16, 2013							
Applicant/Owner:	Good Harvest M	arket, Inc			•	State:	WI	•	Sampling F	oint: T-2 DP -	-3 upl
Investigator(s):	Heather Patti, P	WS				Section, To	wnship, Range:	NW 1/4 S	ec 28, T7N R1	9E	
Landform (hillslope,	terrace, etc.): f	ootslope			Local relief (d	concave, convex,	none):	convex			
Slope % 25-30	0%	Lat:		Long:			Datum:				
Soil Map Unit Name:	<u> </u>	Hochheim soils (F	loD3), 12-20% slopes,	non-hydric)		WWIC	Classification:		none	
Are climatic / hydrolo	ogic conditions on th	e site typical for this time	e of year?		Yes	No	*X	(if no, exp	lain in Remark	s)	
Are Vegetation	N Soil	N or Hydrology	N significantly dis				cumstances" pr			Yes X	No
Are Vegetation	N Soil	N or Hydrology	N naturally proble	matic?		(if needed, expl	ain any answers	in Remarks)			
SUMMARY OF	FINDINGS /	Attach site map s	howing sampling	point lo	cations, tr	ansects, imp	ortant feat	ures, etc.			
Hydrophytic Vegetati	ion Present?	Yes **X	No			Is the Sampled	Area				
Hydric Soil Present?		Yes	No	X		within a Wetland			Yes	No	х
Wetland Hydrology F		Yes	No	Х		If yes, optional	wetland site ID:				
Remarks:	*Current clims	etic conditions are	2-4 inches drier tha	n normal	for this tim	e of year (see	AHPS man I	Figure 6. Ann	endiv 1)		
	**problem inv grow upslope	•	canary grass) that	commoni	ly grows in	disturbed are	as can often				
HYDROLOGY											
Wetland Hydrology	Indicators:						Second	lary Indicators (ı	minimum of two	o required)	
Primary Indicators (n	minimum of one is re	equired; check all that ap	oply)					Surface S	oil Cracks (B6))	
Surface Water (. ,		/ater-Stained Leaves (B	9)					Patterns (B10)		
High Water Tab	` '		quatic Fauna (B13)				-		n Lines (B16)	· (C2)	
Saturation (A3) Water Marks (B			larl Deposits (B15) lydrogen Sulfide Odor (C	21)			-		on Water Table Burrows (C8)	÷ (C2)	
Sediment Depos	,		xidized Rhizospheres or		ots (C3)		-		Visible on Aer	rial Imagery (0	C9)
Drift Deposits (E			resence of Reduced Iron	-					r Stressed Plan		
Algal Mat or Cru			ecent Iron Reduction in	Tilled Soils	(C6)				nic Position (D2	2)	
Iron Deposits (E	•		hin Muck Surface (C7)	\					quitard (D3)	(D.4)	
	ole on Aerial Imagery ated Concave Surfa		ther (Explain in Remark	S)					graphic Relief ral Test (D5)	(D4)	
Sparsely veget	ateu Concave Suna	ce (B6)						I AC-Neut	iai rest (DS)		
Field Observations	:										
Surface Water Prese	ent? Yes	No X_	Depth (inches):								
Water Table Present		No X	Depth (inches):						_		
Saturation Present? (includes capillary fri	Yes	No X	Depth (inches):			In	dicators of We	tland Hydrolog	y Present?	Yes	No X
Describe Recorded I USGS Topograpi Wetland Inventor	Data (stream gauge hic Map (Figure ry (Figure 5), and	1), NRCS Soil Surver d AHPS precipitation		2005, and	1 2010 aeria			-C), Wiscons	in		
	vetland hydrolog ndary in this are		esent. There is a ve	ery steep	topographi	c break along	the wetland				

VEGETATION - Use scientific nar	mes for plants.		Sampling Point: T-2 DP-3 upl
Tree Stratum (Plot size: 30'R)		minant ecies Indicator Status	Dominance Test Worksheet:
1. Acer negundo	80		Number of Dominant Species That Are OBL, FACW, or FAC:(A)
2. 3.			Total Number of Dominant
4			Species Across All Strata: 3 (B)
5			Percent of Dominant Species
6 7	80 = Total	Cover	That Are OBL, FACW, or FAC: 67% (A/B)
		Cover	Prevalence Index Worksheet:
			Total % Cover of: Multiply by:
Capling/Chruh Stratum /Diet einer n/e	`		OBL species x 1 = FACW species x 2 =
Sapling/Shrub Stratum (Plot size: n/a 1.			FACW species
1. 2.			FACU species x 4 =
3.			UPL species x 5 =
4.			Column Totals: (A) (B)
5			
6			Prevalence Index B/A =
,. <u> </u>	0 = Total	Cover	Hydrophytic Vegetation Indicators:
			Rapid Test for Hydrophytic Vegetation
			X Dominance Test is >50%
			Prevalence Index is ≤ 3.0 ¹
Herb Stratum (Plot size: 5'R	<u> </u>		Morphological Adaptations ¹ (Provide supporting
1. Phalaris arundinacea	50	Y FACW	data in Remarks or on separate sheet)
2. Alliaria petiolata	<u>40</u> 10	Y FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Rhamnus cathartica 4. Pastinaca sativa		N FAC UPL	
		N FACU	¹ Indicators of hydric soil and wetland hydrology must
		I ACC	be present, unless disturbed or problematic.
6. 7.			be present, unless distarbed of problematic.
8.			
9.			Definitions of Vegetation Strata:
10.			•
11.		<u> </u>	Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12.			at brest height (DBH), regardless of height.
13.			
14			Sapling/shrub - Woody plants less than 3 in. DBH
	108 = Total	Cover	and greater than 3.28 ft (1m) tall.
			Herb - All herbaceous (non-woody) plants, regardless
			of size, and woody plants less than 3.28 ft. tall.
Woody Vine Stratum (Plot size: n/a)		or olzo, and woody planto loss than olzo it. tall.
· · · · · · · · · · · · · · · · · · ·			Woody vines - All woody vines greater than 3.28 ft. in
1.			height.
2			
3			Hydrophytic
4			Vegetation
	0 = Tota	al Cover	Present?
Remarks: (Include photo numbers here or o	un a conarato cheet \		
The state of the s	•	ndinacea is growing well upsi	ope from the wetland boundary. This is an old field community
with scattered box elder trees.		amassa is growing went apor	ppe from the freedrike boundary. The fe are old flow community

SOIL Sampling Point: T-2 DP-3 upl

es) Color (moist) 0-16 10YR 3/2 16-20 10YR 4/3 10YR 5/3	% Color (moist 100 - 70 7.5YR 4/6 20	10	Type' C	Loc ²	Texture silt loam silty clay loam	Remarks small cobble throughout profile
16-20 10YR 4/3	70 7.5YR 4/6	10	С	М		oman cobbie throughout prome
					city city touin	
			-			
			. ———			
						-
						-
<u> </u>						
	' <u></u> '					
		1	•			
e: C=Concentration, D=Depletion, RM=Red	luced Matrix, CS=Covered or	Coated Sand Grains		² Lo	cation: PL=Pore Lining,	M=Matrix
ic Soil Indicators:					Indicators for Pro	oblematic Hydric Soils ³ :
Histosol (A1)	Plolyvalue Belo	w Surface (S8) (LRF	RR		2cm Muc	k (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B)	, , ,			Coast Pra	airie Redox (A16) (LRR K, L, R)
Black Histic (A3)		ace (S9) (LRR R, M L				ky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)		/lineral (F1) (LRR K,	L)			face (S7) (LRR K, L)
Stratified Layers (A5)	Loamy Gleyed					e Below Surface (S8) (LRR K L)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12)	Depleted Matrix Redox Dark St	` '				s Surface (S9) (LRR K, L) ganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1)	Depleted Dark St					t Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4)	Redox Depress	` '				odic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5)		(. 5)				ent Material (TF2)
Stripped Matrix (S6)					Very Sha	llow Dark Surface (TF12)
Dark SURface (S7) (LRR R, MLRA 149B)					Other (Ex	rplain in Remarks)
cators of hydrophytic vegetation and wetlar	nd hydrology must be present	unless disturbed or	problematic			
	ia nyarology mast be present,	unicas disturbed of	problematic.			
rictive Layer (if observed): Type: n/a						
Depth (inches): n/a					Hydric Soil Present?	Yes No X
<u></u>					,	<u></u>
arks: Hydric soil criterion has no	ot been met.					

Project/Site:	Waukesha G	ood Harvest Mark	et		City/0	County: Waukesha/Wau	ikesha	Sampling I	Date: October 16, 2	.013
Applicant/Owner:	Good Harves	st Market, Inc				State:	WI		Sampling Point:	T-2 DP-4 wtd
Investigator(s):	Heather Patt	i				Section, Town	ship, Range:	NW 1/4 S	ec 28, T7N R19E	
Landform (hillslope,	terrace, etc.):	stream teri	race		Local relief (concave, convex, non	e):	concave		
Slope % 0%		Lat:		Lo	ong:		Datum:			
Soil Map Unit Name	: <u> </u>		Houghton mu	ck (HtA), hydric			WWI Cla	ssification:	T3/S3K mapped a	adjacent to ROW
Are climatic / hydrolo	ogic conditions o	n the site typical fo	r this time of yea	ar?	Yes	No *2	<u> </u>	(if no, exp	lain in Remarks)	
Are Vegetation	<u>N</u> 5	Soil <u>N</u> or	Hydrology	N significantly distur	rbed?	Are "Normal Circum	stances" pres	ent?	Yes	X No
Are Vegetation	<u>N</u> 5	Soil <u>N</u> or	Hydrology	N naturally problems	atic?	(if needed, explain a	ny answers in	Remarks)		
SUMMARY OF	FINDINGS -	Attach site	map showir	ng sampling poin	t locations, tr	ansects, import	ant feature	es. etc.		
Hydrophytic Vegetat			Yes X	No	,	Is the Sampled Area				
Hydric Soil Present?			Yes X	No		within a Wetland?	- '		Yes X	No
Wetland Hydrology F			Yes X	No		If yes, optional wetla	and site ID:		W-1	
Remarks:				ches drier than nor	_					
	All 3 wetla	nd criteria are n	net.							
HYDROLOGY										
Wetland Hydrology	/ Indicators:						Secondar	v Indicators (r	minimum of two requ	uired)
Primary Indicators (r		is required; check a	all that apply)						oil Cracks (B6)	<u></u>
Surface Water	(A1)		X Wat	ter-Stained Leaves (B9)				Drainage	Patterns (B10)	
X High Water Tab	. ,			atic Fauna (B13)				_	n Lines (B16)	
X Saturation (A3)			Mar	l Deposits (B15)				Dry-Seaso	on Water Table (C2)	
Water Marks (E	31)		X Hyd	rogen Sulfide Odor (C1))			Crayfish E	Burrows (C8)	
Sediment Depo				dized Rhizospheres on I					Visible on Aerial Im	
Drift Deposits (sence of Reduced Iron (r Stressed Plants (D	1)
Algal Mat or Cr	. ,			ent Iron Reduction in Til	lled Soils (C6)				nic Position (D2)	
Iron Deposits (E	,	(D7)		Muck Surface (C7)					quitard (D3)	
	ble on Aerial Ima	,	Othe	er (Explain in Remarks)			<u>X</u> _		graphic Relief (D4)	
Sparsely Veget	tated Concave S	ипасе (В8)					X	FAC-Neut	tral Test (D5)	
Field Observations	:									
Surface Water Prese	ent?	Yes	No_X_ D	epth (inches):						
Water Table Presen		Yes X		epth (inches): surfac						
Saturation Present? (includes capillary fri		Yes X	No D	epth (inches): surfac	СӨ	Indica	ators of Wetla	nd Hydrolog	y Present? Yes	X No
Describe Recorded USGS Topograp Wetland Invento	Data (stream ga hic Map (Figury (Figury (Figure 5),	ure 1), NRCS So and AHPS pred	oil Survey (Fig cipitation map		and 2010 aeria					
Remarks: The	wetland hydr	ology criterion	has been me	et. This wetland is a	associated with	n the un-named U	pper Fox tri	butary to th	ne southwest.	

VEGETATION - Use scientific name	s for plants.			Sampling Point: T-2 DP-4 wtd
Tree Stratum (Plot size: 30'R)	Absolute % Cover	Dominant Species	Indicator Status	Dominance Test Worksheet:
1. <i>Fraxinus pennsylvanica</i> 2.		<u> </u>		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3. 4. 5.				Total Number of Dominant Species Across All Strata:3(B)
6. 7.		Total Cover		Percent of Dominant Species That Are OBL, FACW, or FAC:
				Prevalence Index Worksheet: Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15'R 1. Acer negundo	<u>)</u> 5	Y	FAC	OBL species x 1 = FACW species x 2 = FAC species x 3 =
2. 3. 4.				FACU species
5. 6.				Prevalence Index B/A =
7	=	Total Cover		Hydrophytic Vegetation Indicators:
Herb Stratum (Plot size: 5'R				Rapid Test for Hydrophytic Vegetation X Dominance Test is >50% Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (Provide supporting
1. Phalaris arundinacea 2. Urtica dioica 3. 4.	100 10	<u>Y</u> N	FACW FAC	data in Remarks or on separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
5. 6. 7.				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. 9. 10.				Definitions of Vegetation Strata:
11 12 13				Tree - Woody plants 3 in. (7.6 cm) or more in diameter at brest height (DBH), regardless of height.
14.	110 =	Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall.
Woods Vine Stratum (Diet sines - 10	,			Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
Woody Vine Stratum (Plot size: n/a 1 2				Woody vines - All woody vines greater than 3.28 ft. in height.
3. 4.	0	= Total Cover		Hydrophytic Vegetation Present? Yes X No No
Remarks: (Include photo numbers here or on a The hydrophytic vegetation criterion is	separate sheet.) s met. This is a le	owland hardw	ood plant comm	unity dominated by green ash and reed canary grass.

SOIL Sampling Point: T-2 DP-4 wtd Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) Depth Redox Features Color (moist) (inches) Color (moist) Type¹ Texture 0-20+* N 2.5/0 100 muck Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix Hydric Soil Indicators: Indicators for Problematic Hydric Soils³: X Histosol (A1) Plolyvalue Below Surface (S8) (LRR R 2cm Muck (A10) (LRR K, L, MLRA 149B) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Histic Epipedon (A2) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5cm Mucky Peat or Peat (S3) (LRR K, L, R) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Loamy Gleyed Matrix (F2) Plolyvalue Below Surface (S8) (LRR K L) Stratified Layers (A5) Thin Dark Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (TF2) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark SURface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: n/a Depth (inches): n/a Hydric Soil Present? Yes X No Remarks: The hydric soil criterion is met. *Redox features are likely masked by the very dark matrix color.

Project/Site:	Waukesha Go	od Harvest Market		City/C	ounty: Waukesh	na/Waukesi	na	Sampling Date: October 16, 2013				
Applicant/Owner:	Good Harvest	Market, Inc			ı	State:	WI			Sampling P	oint: T-3 DP-	-5 upl
Investigator(s):	Heather Patti					Section	, Townshi	o, Range:	NW 1/4 S	ec 28, T7N R19	9E	
Landform (hillslope, t	terrace, etc.):	footslope			Local relief (c	concave, conve	x, none):		convex			
Slope % ~10%	5	Lat:		Long:			_	Datum:				
Soil Map Unit Name:		Hochheim soils (H	loD3), 12-20% slopes, r	non-hydric	:			WWI Clas	ssification:		none	
Are climatic / hydrolo	ogic conditions on	the site typical for this tim	e of year?		Yes	No	*X		(if no, exp	olain in Remarks	s)	
Are Vegetation	N Soil	N or Hydrology	N significantly dist			Are "Normal (•			Yes X	No
Are Vegetation	N Soil	N or Hydrology	N naturally probler	matic?		(if needed, ex	plain any a	answers in F	Remarks)			
SUMMARY OF	FINDINGS	- Attach site map s	howing sampling	point lo	cations, t	ransects, i	mporta	nt feature	es, etc.			
Hydrophytic Vegetati	ion Present?	Yes	No	х		Is the Sample	d Area					
Hydric Soil Present?		Yes	No	Х		within a Wetla	ınd?			Yes	No_	Х
Wetland Hydrology F	Present?	Yes	No	Х		If yes, optiona	l wetland	site ID:				
	None of the	3 wetland criteria are	met.									
HYDROLOGY												
Wetland Hydrology Primary Indicators (n Surface Water (High Water Tab Saturation (A3) Water Marks (B Sediment Depos	minimum of one is (A1) ole (A2) B1)	A H	pply) /ater-Stained Leaves (Bi quatic Fauna (B13) larl Deposits (B15) ydrogen Sulfide Odor (C xidized Rhizospheres or) (1)	ots (C3)			Secondary I	Surface S Drainage Moss Trin Dry-Sease Crayfish E	inimum of two r Soil Cracks (B6) Patterns (B10) In Lines (B16) on Water Table Burrows (C8) In Visible on Aer	e (C2)	(C9)
	ust (B4)	R T T O	resence of Reduced Iror ecent Iron Reduction in hin Muck Surface (C7) ther (Explain in Remark	Tilled Soils	(C6)				Geomorpi Shallow A Microtopo	r Stressed Plan hic Position (D2 Aquitard (D3) ographic Relief (tral Test (D5)	2)	
Field Observations:	:											
Surface Water Preset Water Table Present Saturation Present? (includes capillary fring	t? Yes Yes	No X	Depth (inches): Depth (inches): Depth (inches):				Indicato	rs of Wetla	nd Hydrolog	y Present?	Yes	No X
USGS Topograph	hic Map (Figure	ge, monitoring well, aerial e 1), NRCS Soil Surve nd AHPS precipitatio	ev (Figure 3), 2000, 2	2005. and		photograph	ıs (Figur	es 4A-C),	Wisconsin			
Remarks: No w	vetland hydrold	ogy indicators are pro	esent.									

VEGETATION - Use scientific nan	nes for plants.			Sampling Point: T-3 DP-5 upl
Tree Stratum (Plot size: n/a)		Dominant Species	Indicator Status	Dominance Test Worksheet:
Acer negundo Populus deltoides	10	Y .	FAC FAC	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
3. 4. 5.				Total Number of Dominant Species Across All Strata: 4 (B)
6. 7.	20 = Tot	tal Cover		Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
		tai oovoi		Prevalence Index Worksheet: Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: n/a 1	<u> </u>			OBL species 0 x 1 = 0 FACW species 20 x 2 = 40 FAC species 20 x 3 = 60 FACU species 100 x 4 = 400
3				UPL species
5 6				Prevalence Index B/A = 3.9
Herb Stratum (Plot size: 5'R 1. Poa pratensis	= Tol	tal Cover	FACU	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is >50% Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (Provide supporting data in Remarks or on separate sheet)
2. Agropyron repens 3. Solidago canadensis 4. Phalaris arundinacea 5. Daucus carota 6.	40 20 20 5	Y N N	UPL FACU FACW UPL	Problematic Hydrophytic Vegetation ¹ (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. 9. 10. 11.				Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter
12 13 14		tal Cover		at brest height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall.
Woody Vine Stratum (Diet sine)				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
Woody Vine Stratum (Plot size: n/a 1				Woody vines - All woody vines greater than 3.28 ft. in height.
3	0 = T	otal Cover		Hydrophytic Vegetation Present? Yes No _X
Remarks: (Include photo numbers here or o The hydrophytic vegetation criterior Kentucky bluegrass and scattered b	n is close but is not			as well. This is an old field community dominated by

SOIL Sampling Point: T-3 DP-5 upl

Profile Description	: (Describe to the depth ne	eded to docu	ment the indicat	or or confirm the	e absence d	f indicators	.)				
						·······································	''				
Depth	Matrix			Redox Feature		2					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-1	10YR 3/1	100	-				silt loam	small cobble throughout profile			
1-15	10YR 3/2	100	-				silt loam				
				<u> </u>							
45.40	40VD 0/0		40 V/D E/0				-114				
15-18+	10YR 3/2	90	10 YR 5/6	10	c	<u>M</u>	silty clay loam				
		<u> </u>						· · · · · · · · · · · · · · · · · · ·			
1 Type: C=Concentra	ation, D=Depletion, RM=Redu	cad Matrix CS	S=Covered or Co	ated Sand Grains		210	cation: PL=Pore Lining, I	M=Matrix			
Type. C-Concentra	ation, D-Depletion, Kivi-Kedu	ceu mairix, Co	5-Covered of Co	aleu Sanu Granis.		LUC	cation. FL-Fore Lining, i	VI-IVIGUIX			
Hydric Soil Indicate	ors.						Indicators for Pro	oblematic Hydric Soils ³ :			
•		_		((00) (1 ==	_			•			
Histosol (A1)				urface (S8) (LRR	R			(A10) (LRR K, L, MLRA 149B)			
Histic Epipedon	n (A2)	М	ILRA 149B)				Coast Prairie Redox (A16) (LRR K, L, R)				
Black Histic (A3	3)	TI	hin Dark Surface	(S9) (LRR R, ML	RA 149B)		5cm Muck	ky Peat or Peat (S3) (LRR K, L, R)			
Hydrogen Sulfic	de (A4)	L	oamy Mucky Mine	eral (F1) (LRR K,	L)		Dark Surfa	ace (S7) (LRR K, L)			
Stratified Layers			pamy Gleyed Mat		_,						
_	` '						Plolyvalue Below Surface (S8) (LRR K L) Thin Dark Surface (S9) (LRR K, L)				
	v Dark Surface (A11)		epleted Matrix (F	*							
Thick Dark Surf	, ,		edox Dark Surfa	, ,			Iron-Manganese Masses (F12) (LRR K, L, R)				
Sandy Mucky M	/lineral (S1)	D	epleted Dark Sur	face (F7)			Piedmont	Floodplain Soils (F19) (MLRA 149B)			
Sandy Gleyed N	Matrix (S4)	R	edox Depression	s (F8)			Mesic Spo	odic (TA6) (MLRA 144A, 145, 149B)			
Sandy Redox (S				- ()				nt Material (TF2)			
							Very Shallow Dark Surface (TF12)				
	Stripped Matrix (S6)							, ,			
Dark SURface	_ Dark SURface (S7) (LRR R, MLRA 149B)						Other (Ex	plain in Remarks)			
3 Indicators of hydro	ophytic vegetation and wetland	l hvdrology mu	ıst be present, un	less disturbed or	problematic.						
		, , , , ,	, , , , , , , , , , , , , , , , , , , ,								
Restrictive Layer (i	if observed):										
Type: n/a											
Depth (inches):	n/a						Hydric Soil Present?	Yes No X			
Deptil (iliches).	100						riyano oon riosenti	163 NO X			
Remarks: Hyd ı	ric soil criterion has not	been met.	Like the other	data points, th	iere is (na	tural) cobb	ole throughout the s	oil profile.			

Project/Site:	Waukesha G	ood Harvest Mark	(et		City/C	ounty: Waukesha/Wa	ukesha	Sampling Date	e: October 16, 2	2013	
Applicant/Owner:	Good Harves	t Market, Inc			='	State:	WI		Sampling Point:	T-3 DP-6	wtd
Investigator(s):	Heather Patti					Section, To	wnship, Range:	NW 1/4 Sec 2	28, T7N R19E		
Landform (hillslope, t	terrace, etc.):	stream ter	ace		Local relief (d	concave, convex, no	one):	concave			
Slope % <u>0%</u>		Lat:		Long:			Datum:				
Soil Map Unit Name:	: <u>—</u>	Hochheim	soils (HoD3),	12-20% slopes, non-hydric			WWI Clas	sification:	S3/	E2K	
Are climatic / hydrolo	•	• • •	•		Yes		*X	(if no, explain	in Remarks)		
Are Vegetation			Hydrology _	N significantly disturbed		Are "Normal Circu			Yes	<u> </u>	No
Are Vegetation	<u>N</u> S	oil <u>N</u> or	Hydrology	N naturally problematic?		(if needed, explain	any answers in R	emarks)			
SUMMARY OF	FINDINGS -	Attach site	map showi	ng sampling point lo	cations, tr	ansects, impo	rtant features	, etc.			
Hydrophytic Vegetati	ion Present?		Yes X	No		Is the Sampled Ar	ea				
Hydric Soil Present?			Yes X	No		within a Wetland?		Ye	s X	No	
Wetland Hydrology P	Present?		Yes X	No		If yes, optional we	land site ID:	W-	2		
	All 3 wetlan	d criteria are m	et at this da	ta point.							
HYDROLOGY											
Wetland Hydrology	Indicators:						Secondary Ir	ndicators (minim	num of two requi	red)	
Primary Indicators (m		s required; check	all that apply)					Surface Soil (Cracks (B6)	,	
Surface Water ((A1)		X Wa	ter-Stained Leaves (B9)			X	Drainage Pat	terns (B10)		
X High Water Tab	ole (A2)			uatic Fauna (B13)				Moss Trim Li	. ,		
X Saturation (A3)				rl Deposits (B15)					Water Table (C2)	
Water Marks (B	,			drogen Sulfide Odor (C1)	- Dt- (O2)			Crayfish Burr	. ,		2)
Sediment Deposits (E	. ,			dized Rhizospheres on Livings sence of Reduced Iron (C4)	g Roots (C3)				sible on Aerial Ir ressed Plants ([9)
Algal Mat or Cru				cent Iron Reduction in Tilled	Soils (C6)			Geomorphic) i j	
Iron Deposits (B				n Muck Surface (C7)	300 (30)			Shallow Aqui			
Inundation Visib		gery (B7)		ner (Explain in Remarks)			Х		phic Relief (D4)		
Sparsely Vegeta	ated Concave S	urface (B8)					Х	FAC-Neutral	Test (D5)		
Field Observations:	:										
Surface Water Prese	ent?	Yes	No X D	Depth (inches):							
Water Table Present	t?	Yes X		Depth (inches): ~10"							
Saturation Present? (includes capillary fri	nae)	Yes X	No	Depth (inches): surface		Ind	icators of Wetlan	d Hydrology P	resent? Yes	<u> </u>	No
Describe Recorded [Data (stream ga	re 1). NRCS So	il Survey (Fig	s, previous inspections), if av gure 3), 2000, 2005, and o (Figure 6)		photographs (F	gures 4A-C), W	/isconsin			
Remarks: Wetla	and hydrolog	y criterion has	been met. T	his wetland is associate	ed with the	un-named tribut	ary to the west	and south.			

VEGETATION - Use scientific names			Sampling Point: T-3 DP-6 wtd
Tree Stratum (Plot size: 30'R)	Absolute % Domina Cover Specie		Dominance Test Worksheet:
1			Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant Species Across All Strata:(B)
6 7	0 = Total Cov	er	Percent of Dominant Species That Are OBL, FACW, or FAC:
		o.	Prevalence Index Worksheet: Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: 15'R 1. 2. 3.	<u> </u>		OBL species x 1 = FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 =
4 5		<u> </u>	Column Totals: (A) (B)
6. 7.			Prevalence Index B/A =
Herb Stratum (Plot size: 5'R 1. <i>Phalaris arundinacea</i>	= Total Cov	er FACW	Hydrophytic Vegetation Indicators: Rapid Test for Hydrophytic Vegetation Dominance Test is >50% Prevalence Index is ≤ 3.0¹ Morphological Adaptations¹ (Provide supporting data in Remarks or on separate sheet)
Cirsium arvense Solidago gigantea	20 N 10 N	FACU FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
4			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8. 9.			Definitions of Vegetation Strata:
10			Tree - Woody plants 3 in. (7.6 cm) or more in diameter at brest height (DBH), regardless of height.
14.	130 = Total Cov	er	Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall.
Woody Vine Stratum (Plot size: n/a)		Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
1			Woody vines - All woody vines greater than 3.28 ft. in height.
3. 4.	0 = Total Cc	over	Hydrophytic Vegetation Present? Yes X No
Remarks: (Include photo numbers here or on a se The hydrophytic vegetation criterion is n		meadow plant community	y within W-1.

SOIL Sampling Point: T-3 DP-6 wtd

Profile Description: (Describe to the depth needed	to document	the indicator or	confirm the	absence of	indicators.)				
Depth Matrix			Redox Featu	ıres						
(inches) Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-4 10YR 3/1	100	_				silt loam	some small cobble present			
4-13 10YR 3/1	90	7.5YR 4/6	10	с	M	silty clay loam	Come chian coppie process			
13-18+ 10YR 5/1	85	7.5YR 4/6	15	c	<u>M</u>	silty clay				
				-						
							<u> </u>			
¹ Type: C=Concentration, D=Depletion, RM=Reduced	Matrix, CS=Co	overed or Coated	Sand Grains	i	² Lc	ocation: PL=Pore Lining, N	M=Matrix			
Hydric Soil Indicators:						Indicators for D-s	blematic Hydric Soils ³ :			
•	_	lahasahsa B. L. G		I DD C			•			
Histosol (A1)		lolyvalue Below S	urface (S8) (LRR R			(A10) (LRR K, L, MLRA 149B)			
Histic Epipedon (A2)		ILRA 149B)				Coast Prairie Redox (A16) (LRR K, L, R)				
Black Histic (A3)		hin Dark Surface (5)		y Peat or Peat (S3) (LRR K, L, R)			
Hydrogen Sulfide (A4)		oamy Mucky Mine	. , .	RK,L)		Dark Surface (S7) (LRR K, L)				
Stratified Layers (A5)		oamy Gleyed Mati				Plolyvalue Below Surface (S8) (LRR K L)				
Depleted Below Dark Surface (A11)		epleted Matrix (F3	,			Thin Dark Surface (S9) (LRR K, L)				
Thick Dark Surface (A12)		edox Dark Surfac				Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)				
Sandy Mucky Mineral (S1)		epleted Dark Surf								
Sandy Gleyed Matrix (S4)	R	edox Depressions	s (F8)				dic (TA6) (MLRA 144A, 145, 149B)			
Sandy Redox (S5)							nt Material (TF2)			
, ,	ped Matrix (S6)						ow Dark Surface (TF12)			
Dark SURface (S7) (LRR R, MLRA 149B)						Other (Exp	olain in Remarks)			
3 Indicators of hydrophytic vegetation and wetland hyd	rology must b	e present, unless	disturbed or	problematic.						
Restrictive Layer (if observed):										
Type: n/a										
Depth (inches): n/a						Hydric Soil Present?	Yes X No			
,						•				
Remarks: The hydric soil criterion has bee	n met									
ricinance.										