Exhibit 8. Preliminary Vegetation Survey

Lynn Kurer and Wayne Bushberger Properties

Dates: August 28 and September 4 and 5, 2019

Observers: Christopher J. Jors, Principal Biologist
Daniel L. Carter, Ph.D., Principal Biologist
Jennifer L. Dietl, Senior Biologist
Shane T. Heyel, Biologist
Southeastern Wisconsin Regional Planning Commission

Location: City of Muskego in parts of the Northwest and Northeast one-quarters of U.S. Public Land Survey Sections 13 and 14, respectively, Township 5 North, Range 20 East, Waukesha County, Wisconsin.

Species List: Plant Community Area No. 1 – Native Species

Co-dominant species

Alisma subcordatum--Common water plantain
Amaranthus tuberculatus--Amaranth
Ambrosia artemisiifolia--Common ragweed
Ambrosia trifida--Giant ragweed
Bidens sp.--Beggars-ticks
Carex vulpinoidea--Fox sedge
Chenopodium album--Lamb's quarters
***Cyperus esculentus*--Chufa**
***Eleocharis obtusa*--Spike-rush**
Epilobium coloratum--Willow-herb
Equisetum hyemale--Scouring-rush
Erigeron canadensis--Horseweed
Eupatorium perfoliatum--Boneset
Eutrochium maculatum--Joe-Pye weed
Juncus bufonius--Toad rush
Juncus dudleyi--Dudley's rush
Juncus nodosus--Joint rush
Juncus torreyi--Torrey's rush
Leersia oryzoides--Rice cut grass
Lobelia siphilitica--Great blue lobelia
Mentha arvensis--Wild mint
Mimulus ringens--Monkey flower
Panicum capillare--Witch grass
Panicum dichotomiflorum--Knee grass
Penthorum sedoides--Ditch stonecrop
Persicaria lapathifolia--Heart's-ease
Plantago rugelii--Red-stalked plantain
Populus deltoides--Cottonwood
Potentilla norvegica--Norway cinquefoil
***Rorippa palustris*--Rough marsh cress**

PCA 1 cont. Native Species

Salix discolor--Pussy willow
Scirpus atrovirens--Green bulrush
Scirpus pendulus--Red bulrush
Solidago altissima--Tall goldenrod
Solidago gigantea--Giant goldenrod
Symphyotrichum puniceum--Red-stemmed aster
Verbena hastata--Blue vervain
***Veronica peregrina*--Purslane speedwell**
Xanthium strumarium--Cocklebur

NON-Native Species

Abutilon theophrasti--Velvet-leaf
Centaurium pulchellum--Centaury
Cirsium arvense--Canada thistle
Echinochloa crusgalli--Barnyard grass
Hibiscus trionum--Flower-of-the-hour
Hordeum jubatum--Squirreltail
Lythrum salicaria--Purple loosestrife
Persicaria maculosa--Lady's thumb
Phalaris arundinacea--Reed canary grass
***Phragmites australis* subsp. *australis*--Tall reed grass**
Puccinellia distans--Alkali grass
Thlaspi arvense--Penny cress
Typha angustifolia--Narrow-leaved cat-tail

Total number of plant species: 52
Number of alien, or non-native, plant species: 13 (25 percent)

This approximately 16.8-acre plant community area consists primarily of atypical (farmed) wetland with smaller areas of fresh (wet) meadow and shallow marsh. Disturbances to the plant community area include past clearing of vegetation, siltation and sedimentation due to stormwater runoff from adjacent lands, water level changes due to tile installation and draining, and agricultural land management activities such as cultivation and herbicide applications. While no Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection, the WDNR Natural Heritage Inventory contains records of two State-designated Endangered and two Special Concern bird species in nearby Big Muskego Lake.

Plant Community Area No. 2 – Native Species

***Acer negundo*--Boxelder**
Cyperus esculentus--Chufa
Echinocystis lobata--Wild cucumber
Equisetum hyemale--Scouring-rush
Fraxinus pennsylvanica--Green ash
Juncus dudleyi--Dudley's rush
Lobelia siphilitica--Great blue lobelia
Panicum capillare--Witch grass
Populus deltoides--Cottonwood
***Salix amygdaloides*--Peach-leaved willow**
***Salix interior*--Sandbar willow**

PCA 2 cont. Native Species

Solidago altissima--Tall goldenrod
Solidago gigantea--Giant goldenrod
Symphyotrichum lanceolatum--Marsh aster
Symphyotrichum puniceum--Red-stemmed aster
Vitis riparia--Riverbank grape
Xanthium strumarium--Cocklebur

NON-Native Species.

Agrostis gigantea--Redtop grass
Phalaris arundinacea--Reed canary grass
Rhamnus cathartica--Common buckthorn
Solanum dulcamara--Deadly nightshade

Total number of plant species: 21
Number of alien, or non-native, plant species: 4 (19 percent)

This approximately 7.00-acre plant community area consists of shrub-carr (willow thicket) and hardwood swamp. Disturbances to the plant community area include clearing of vegetation, siltation and sedimentation due to stormwater runoff from adjacent lands, water level changes due to tile installation and draining, and agricultural land management activities such as cultivation and herbicide applications. While no Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection, the WDNR Natural Heritage Inventory contains records of two State-designated Endangered and two Special Concern bird species in nearby Big Muskego Lake.

Plant Community Area No. 3 – Native Species

Carex vulpinoidea--Fox sedge

NON-Native Species

***Agrostis stolonifera*--Creeping bentgrass**
Glechoma hederacea--Creeping Charlie
Phalaris arundinacea--Reed canary grass
Plantago major--Common plantain
***Poa pratensis*--Kentucky bluegrass**
Rumex crispus--Curly dock
Taraxacum officinale--Common dandelion
Trifolium repens--White clover

Total number of plant species: 9
Number of alien, or non-native, plant species: 8 (89 percent)

This approximately 0.1-acre wetland plant community area is part of a constructed roadside ditch and consists of degraded fresh (wet) meadow. Disturbances to the plant community area include mowing, siltation and sedimentation due to stormwater runoff from adjacent lands, and water level changes due to ditching. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 4 – Native Species

Acer negundo--Boxelder
Bidens sp.--Beggars-ticks
Calamagrostis canadensis--Canada bluejoint
Carex granularis--Pale sedge
Carex grisea--Wood gray sedge
Carex sp.--Sedge
Circaea canadensis--Enchanter's nightshade
Cornus alba--Red-osier dogwood
Epilobium coloratum--Willow-herb
Eutrochium maculatum--Joe-Pye weed
***Fraxinus pennsylvanica*--Green ash (dying or dead)**
Geum canadense--White avens
Impatiens capensis--Jewelweed
Iris virginica--Virginia blueflag
Lemna minor--Lesser duckweed
Lobelia siphilitica--Great blue lobelia
Persicaria amphibia--Water smartweed
Persicaria lapathifolia--Heart's-ease
***Populus tremuloides*--Quaking aspen**
Prunella vulgaris--Selfheal
Pycnanthemum virginianum--Mountainmint
Ranunculus sceleratus--Cursed crowfoot
Ribes americanum--Wild black currant
Salix amygdaloides--Peach-leaved willow
Schoenoplectus pungens--Chairmaker's-rush
Schoenoplectus tabernaemontani--Soft-stemmed bulrush
Symphyotrichum lateriflorum--Calico aster
***Typha latifolia*--Broad-leaved cattail**
Verbena hastata--Blue vervain
Viburnum lentago--Nannyberry
Vitis riparia--Riverbank grape

NON-Native Species

Agrostis gigantea--Redtop grass
Catalpa speciosa--Catalpa (planted)
Frangula alnus--Glossy buckthorn
Hesperis matronalis--Dame's rocket
Lythrum salicaria--Purple loosestrife
Phragmites australis subsp. *australis*--Tall reed grass
Physalis alkekengi--Ground-cherry
Picea pungens--Colorado blue spruce (planted)
Plantago major--Common plantain
Poa pratensis--Kentucky bluegrass
Populus alba--White poplar
***Rhamnus cathartica*--Common buckthorn**
Setaria pumila--Yellow foxtail
Solanum dulcamara--Deadly nightshade
Taraxacum officinale--Common dandelion
***Typha angustifolia*--Narrow-leaved cat-tail**
Viburnum opulus--European highbush-cranberry

PCA 4 cont.

Total number of plant species: 48
Number of alien, or non-native, plant species: 17 (35 percent)

This approximately 28.9-acre plant community area is part of the Big Muskego Lake floodplain-wetland complex and consists of deep and shallow marsh, fresh (wet) meadow, shrub-carr (buckthorn thicket), hardwood swamp, and open water. Disturbances to the plant community area include dumping, filling, pond and channel excavation, side casting of dredge spoil material, siltation and sedimentation due to stormwater runoff from adjacent lands, and water level changes due to ditching and draining. While no Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection, the WDNR Natural Heritage Inventory contains records of two State-designated Endangered and two Special Concern bird species in Big Muskego Lake. Further the southern portion of this PCA has been identifies as a Natural Area of countywide or Regional significance (NA-2), known as Muskego Lake Marsh, in the December, 2010, *Amendment to the Natural Areas and Critical Species Habitat Protection and Management Plan for the Southeastern Wisconsin Region*.

SVY4588
CA722-246

Exhibit 9.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 1
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): slight toeslope>depression Local relief (concave, convex, none): concave
Slope (%): 2-6% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ozaukee silt loam (OzaB) NWI classification: wetland too small to delineate
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Cyperus esculentus	**35**	☒	**FACW**
2. Eleocharis obtusa	**30**	☒	**OBL**
3. Veronica peregrina	15	☐	FACW
4. Erigeron canadensis	5	☐	FACU
5. Amaranthus tuberculatus	3	☐	OBL
6. Echinochloa crus-galli	3	☐	FACW
7. Persicaria lapathifolia	2	☐	FACW
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	93	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has been recently herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR 4/2	97	7.5YR 3/4	3	C	PL M	Silty clay loam	
13-24	10YR 4/3	98	10YR 3/6	2	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ **Depleted Matrix (F3)**
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☒ **Algal Mat or Crust (B4)**
- ☐ Iron Deposits (B5)
- ☒ **Inundation Visible on Aerial Imagery (B7)**
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 22

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 13

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area A (Exhibits 12, 13, and 14)..

Remarks: The C6 indicator not marked as timing of the last cultivation is unknown. The image review indicated that 5 out of 8 (63%) images with normal antecedent precipitation showed signatures of inundation (SW-standing water) and/or saturation.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 2
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): slight slope Local relief (concave, convex, none): linear
Slope (%): 2-6% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ozaukee silt loam (OzaB) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?** ☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**	
Wetland Hydrology Present?	☐Yes	☒**No**	

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**25**	☒	**FAC**
2. Thlaspi arvense	**20**	☒	**FACU**
3. Panicum dichotomiflorum	**18**	☒	**FACW**
4. Veronica peregrina	15	☐	FACW
5. Amaranthus tuberculatus	5	☐	OBL
6. Taraxacum officinale	3	☐	FACU
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	86	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has been recently herbicided but was still able to be identified. Agricultural field.

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-24	10YR 3/4	100					Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 20

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary indicator of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 3
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 2-6% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ozaukee silt loam (OzaB) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Cyperus esculentus	**2**	☒	**FACW**
2. Typha angustifolia	**2**	☒	**OBL**
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	4	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has been recently herbicided and plowed but was still able to be identified. The edge of the agricultural field was dominated with Phalaris arundinacea (FACW). Atypical (farmed) wetland.

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10YR 4/2	96	7.5YR 3/4	4	C	PL M	Silt loam	
8-18	10YR 4/2	100					Silt loam	
18+								Too wet to pull up.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ **Depleted Matrix (F3)**
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☒ **High Water Table (A2)**
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☒ **Recent Iron Reduction in Tilled Soils (C6)**
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 0.5

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: This sample area not included in the image review as is lies at the edge of the agricultural field near a fence line with shrubs and trees that create shadows on the images.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 4 & Probe 1
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 2-6% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ozaukee silt loam (OzaB) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**		
Wetland Hydrology Present?	☒**Yes**	☐No		

Remarks: 90-day antecedent precipitation is normal. Probe site 1 was inspected in a slight depression just west of sample point 4 near a NRCS "wet spot" shown on the WWI mapping (Exhibit 2). While wetland hydrology was present at the probe site, hydric soils and hydrophytic vegetation were not present. Therefore, wetland was not present at the probe site.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum dichotomiflorum	**3**	☒	**FACW**
2. Cirsium arvense	**1**	☒	**FACU**
3. Veronica peregrina	**1**	☒	**FACW**
4. _____	_____	☐	_____
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	5	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has been recently herbicided and plowed but was still able to be identified. Agricultural field.

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-11	10YR 3/3	100					Clay loam	
11-24	7.5YR 3/4	100					Silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☒ **Crayfish Burrows (C8)**
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 23

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 5
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Eleocharis obtusa	**30**	☒	**OBL**
2. Cyperus esculentus	**20**	☒	**FACW**
3. Rorripa palustris	15	☐	OBL
4. Veronica peregrina	12	☐	FACW
5. Panicum capillare	10	☐	FAC
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	87	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has been recently herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-18	5Y 2.5/1	100					Silty clay loam	
18-24	5Y 4/1	75	10YR 4/6	25	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☒ **Inundation Visible on Aerial Imagery (B7)**
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 23

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area B (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 6 out of 8 (75%) images with normal antecedent precipitation showed signatures of inundation (SW-standing water) and/or saturation. The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 6
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): broad swale Local relief (concave, convex, none): linear concave
Slope (%): 1-3% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Elliott silt loam (EsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**55**	☒	**FAC**
2. Rorripa palustris	15	☐	OBL
3. Veronica peregrina	10	☐	FACW
4. Erigeron canadensis	5	☐	FACU
5. Persicaria lapathifolia	3	☐	FACW
6. Plantago rugelii	3	☐	FAC
7. Rosa sp.	2	☐	NI
8. Solidago altissima	2	☐	FACU
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	95	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has been recently herbicided but was still able to be identified. Old field/agricultural field.

SOIL

Sampling Point: 6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 3/1	100					Silt loam	
14-24	5Y 5/2	70	2.5Y 4/4	30	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☒ **Crayfish Burrows (C8)**
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 18

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The Geomorphic Position (D2) indicator does not apply due a drain tile system. Only one-secondary indicator of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 7
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes** ☐ No
Hydric Soils Present?	☒ **Yes**	☐ No		
Wetland Hydrology Present?	☒ **Yes**	☐ No		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Persicaria lapathifolia	**35**	☒	**FACW**
2. Rorripa palustris	**30**	☒	**OBL**
3. Veronica peregrina	15	☐	FACW
4. Panicum dichotomiflorum	5	☐	FACW
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	85	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has been recently herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 2/1	100					Silty clay loam	
11-16	2.5Y 2.5/1	80	10YR 3/6	10	C	PL M	Clay loam	
	2.5Y 4/1	10						
16-20	5Y 5/2	60	10YR 4/6	40	C	PL M	Silty clay loam	with dolomite
20-24	5Y 5/1	80	10YR 3/6	20	C	PL M	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 20

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 10

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area B (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 6 out of 8 (75%) images with normal antecedent precipitation showed signatures of saturation(C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 8
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal. Sample in this location was chosen as elevation was slightly higher than wetland sample site 7 and the landform was changing from depressional to a toeslope.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**30**	☒	**FAC**
2. Amaranthus tuberculatus	**25**	☒	**OBL**
3. Veronica peregrina	**20**	☒	**FACW**
4. Rorripa palustris	5	☐	OBL
5. Persicaria lapathifolia	3	☐	FACW
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	83	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has been recently herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10YR 2/1	100					Clay loam	
12-24	5Y 5/2	65	10YR 4/6	35	C	PL M	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 19

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 6

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area B (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 6 out of 8 (75%) images with normal antecedent precipitation showed signatures of saturation(C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 9
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Thlaspi arvense	**30**	☒	**FACU**
2. Panicum capillare	**15**	☒	**FAC**
3. Plantago rugelii	5	☐	FAC
4. Veronica peregrina	5	☐	FACW
5. Soldago altissima	2	☐	FACU
6. Cornus alba	1	☐	FACW
7. Morus alba	1	☐	FACU
8. Rhamnus cathartica	1	☐	FAC
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	60	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Agricultural field.

SOIL

Sampling Point: 9

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 2/1	100					Silty clay loam	
10-18	2.5Y 4/1	75	7.5YR 3/4	25	C	PL M	Clay loam	
18-24	10Y 4/1	60	10YR 5/8	40	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ **Depleted Matrix (F3)**
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☒ **Crayfish Burrows (C8)**
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 18

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary indicator of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 10
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Thlasp arvense	**30**	☒	**FACU**
2. Veronica peregrina	5	☐	FACW
3. Glycine max (planted)	4	☐	NI (UPL)
4. Solidago altissima	3	☐	FACU
5. Erigeron canadensis	2	☐	FACU
6. Oxalis stricta	1	☐	FACU
7. Rhamnus cathartica	1	☐	FAC
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	46	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Agricultural field.

SOIL

Sampling Point: 10

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR 2/1	100					Clay loam	
13-20	2.5Y 3/1	95	10YR 3/3	5	C	PL M	Clay loam	
20-26	10Y 5/1	50	10YR 5/8	50	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 19

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area B (Exhibits 12, 13, and 14).

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 11
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**30**	☒	**FAC**
2. Veronica peregrina	**15**	☒	**FACW**
3. Persicaria maculosa	12	☐	FACW
4. Juncus dudleyi	10	☐	FACW
5. Rorripa palustris	10	☐	OBL
6. Plantago rugelii	5	☐	FAC
7. Typha angustifolia	3	☐	OBL
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	85	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 11

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					Clay loam	
8-14	2.5Y 2.5/1	96	10YR 3/3	4	C	PL M	Clay loam	
14-16	2.5Y 3/1	70	10YR 3/4	30	C	PL M	Clay loam	
16-24	10Y 5/2	65	10YR 5/8	35	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 21

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 8

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The image review indicated that 6 out of 8 (75%) images with normal antecedent precipitation showed signatures of saturation(C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 12
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**30**	☒	**FAC**
2. Erigeron canadensis	**20**	☒	**FACU**
3. Thlaspi arvense	**18**	☒	**FACU**
4. Veronica peregrina	15	☐	FACW
5. Glycine max (planted 2018)	2	☐	NI (UPL)
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	85	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Agricultural field.

SOIL

Sampling Point: 12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 2/1	100					Clay loam	
14-17	2.5Y 2.5/1	90	2.5Y 4/1	5	D	PL M	Clay loam	
			10YR 3/6	5	C	PL M		
17-21	5Y 3/1	80	10YR 3/4	20	C	PL M	Clay loam	
21-24	5Y 4/1	75	10YR 3/4	25	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: The Thick Dark Surface (A12) indicator may have been met if the sample had reached a depth of 27 inches. However, given that both hydrophytic vegetation and wetland hydrology were not present, it was deemed unnecessary.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☒ **No** ☐ Depth (inches): 20

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 13
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): slight slope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: T3/E2K
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer negundo	**40**	☒	**FAC**
2. Rhamnus cathartica	**15**	☒	**FAC**
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	55	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rhamnus cathartica	**40**	☒	**FAC**
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	40	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Circaea canadensis	**25**	☒	**FACU**
2. Alliaria petiolata	**20**	☒	**FAC**
3. Rhamnus cathartica	**12**	☒	**FAC**
4. Geum canadense	10	☐	FAC
5. Hackelia virginiana	10	☐	FACU
6. Arctium minus	8	☐	FACU
7. Parthenocissus quinquefolia	5	☐	FACU
8. Rosa multiflora	5	☐	FACU
9. Acer negundo	3	☐	FAC
10. Rubus occidentalis	3	☐	NI (UPL)
	104*	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. Vitis riparia	**10**	☒	**FACW**
2. Parthenocissus quinquefolia	**3**	☒	**FACU**
	13	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) *Other NON-dominant herbs include: Sambucus nigra (3%) FAC. Hardwoods.

SOIL

Sampling Point: 13

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-21	10YR 2/1	100					Silty clay loam	
21-22	10YR 3/1	100					Sandy clay loam	
22-28	10YR 4/1	85	10YR 4/4	13	C	PL M	Clay loam	
			2.5Y 5/1	12	D	PL M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 22

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 14
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: T3/E2K
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. **Salix amygdaloides**	**60**	☒	**FACW**
2. **Rhamnus cathartica**	**35**	☒	**FAC**
3. Acer negundo	15	☐	FAC
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	110	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. **Rhamnus cathartica**	**5**	☒	**FAC**
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	5	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. **Rhamnus cathartica**	**6**	☒	**FAC**
2. **Vitis riparia**	**2**	☒	**FACW**
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	8	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Hardwood swamp.

SOIL

Sampling Point: 14

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-8	10YR 2/1	100					Silt loam	
8-22	N 2.5/	100					Muck	
22-32	5YR 2/1	100					Peat	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ **Histosol (A1)**
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ **Water-Stained Leaves (B9)**
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 18

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 5

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 15
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): flat
Slope (%): 1-3% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Matherton silt loam (MmA) NWI classification: _____
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal. Determined that this sample site was effectively drained due to a large tile failure (water drains into a collapsed area via suface flow vs. underground drain tile) just north of the sample site. In addition, at nearby wetland sample sites 16 and 17, a water table was observed within 24 inches and met the dry-season water table (C2) indicator, while a water table was not observed at this sample site.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Echinochloa crus-galli	**35**	☒	**FACW**
2. Veronica peregrina	**15**	☒	**FACW**
3. Erigeron canadensis	8	☐	FACU
4. Thlaspi arvense	5	☐	FACU
5. Ambrosia artemisiifolia	3	☐	FACU
6. Glycine max (planted 2018)	2	☐	NI (UPL)
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	68	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Agricultural field.

SOIL

Sampling Point: 15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	10YR 2/1	100					Clay loam	
6-15	5Y 2.5/1	95	10YR 3/4	5	C	PL M	Clay loam	
15-24	2.5Y 4/2	85	5Y 5/2	10	D	M	Sandy clay loam	
			2.5Y 4/4	5	C	PL M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 20

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The Geomorphic Position (D2) indicator does not apply due a drain tile system. Only one secondary indicator of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 16
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 1-3% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Matherton silt loam (MmA) NWI classification: F0Kf
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Echinochloa crus-galii	**30**	☒	**FACW**
2. Rorripa palustris	**25**	☒	**OBL**
3. Veronica peregrina	12	☐	FACW
4. Persicaria lapathifolia	8	☐	FACW
5. Plantago rugelii	5	☐	FAC
6. Puccinellia distans	3	☐	OBL
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	83	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Atypical (farmed) wetland.

SOIL

Sampling Point: 16

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	2.5Y 2.5/1	100					Clay loam	
12-22	2.5Y 4/1	90	10YR 4/4	10	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☒ **Sediment Deposits (B2)**
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 21

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 9

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area B (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 6 out of 8 (75%) images with normal antecedent precipitation showed signatures of saturation(C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 17
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): broad swale Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Echinochloa crus-galli	**20**	☒	**FACW**
2. Amaranthus tuberculatus	**15**	☒	**OBL**
3. Persicaria lapathifolia	**15**	☒	**FACW**
4. Rorripa palustris	12	☐	OBL
5. Veronica peregrina	10	☐	FACW
6. Panicum dichotomiflorum	8	☐	FACW
7. Solidago altissima	5	☐	FACU
8. Thlaspi arvense	3	☐	FACU
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	88	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 17

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-11	5Y 2.5/1	100					Clay loam	
11-16	5Y 5/1	92	10YR 4/4	8	C	PL M	Sandy clay loam	
16-24	5Y 5/1	80	10YR 4/4	20	C	PL M	Sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 22

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0-6 and 14

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4).

Remarks: The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 18
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**25**	☒	**FAC**
2. Thlaspi arvense	**20**	☒	**FACU**
3. Veronica peregrina	12	☐	FACW
4. Rorripa palustris	10	☐	OBL
5. Erigeron canadensis	8	☐	FACU
6. Amaranthus tuberculatus	5	☐	OBL
7. Solidago altissima	3	☐	FACU
8. Frangula alnus	1	☐	FACW
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	84	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Agricultural field.

SOIL

Sampling Point: 18

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	5Y 2.5/1	100					Clay loam	
14-24	5Y 5/2	90	10YR 4/6	10	C	PL M	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☒ **Crayfish Burrows (C8)**
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 22

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary indicator of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 19
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: F0Kf
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**40**	☒	**FAC**
2. Juncus dudleyi	**35**	☒	**FACW**
3. Juncus nodosus	10	☐	OBL
4. Plantago rugelii	8	☐	FAC
5. Alisma subcordatum	5	☐	OBL
6. Salix amygdaloides	5	☐	FACW
7. Typha angustifolia	2	☐	OBL
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	105	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 19

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-24	N 2.5/	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ **Histosol (A1)**
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☒ **Iron Deposits (B5)**
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 20

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 10

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area C (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 5 out of 8 (63%) images with normal antecedent precipitation showed signatures of saturation(C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 20
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**70**	☒	**FAC**
2. Veronica peregrina	12	☐	FACW
3. Amaranthus tuberculatus	10	☐	OBL
4. Erigeron canadensis	8	☐	FACU
5. Rorripa palustris	5	☐	OBL
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	105	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Old field occasionally farmed.

SOIL

Sampling Point: 20

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	N 2.5/	100					Loam	
18-24	2.5Y 4/2	96	10YR 4/4	4	C	PL M	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 21

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary indicator of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 21
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**30**	☒	**FAC**
2. Cyperus esculentus	**20**	☒	**FACW**
3. Rorripa palustris	15	☐	OBL
4. Veronica peregrina	15	☐	FACW
5. Plantago rugelii	8	☐	FAC
6. Juncus bufonius	5	☐	FACW
7. Hibiscus trionium	2	☐	NI (UPL)
8. Typha angustifolia	1	☐	OBL
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	96	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 21

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-13	5Y 2.5/1	100					Clay loam	
13-15	5Y 5/1	85	10YR 3/6	10	C	PL M	Clay loam	with gravel
			10GY 4/1	5	D	PL M		
15-18	2.5Y 4/2	90	5GY 4/1	6	D	PL M	Sandy clay loam	with gravel
			10YR 4/6	4	C	PL M		
18-24	5Y 5/1	85	2.5Y 4/4	10	C	PL M	Clay loam	
			5GY 5/1	5	D	PL M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 22

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 14

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area B (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 6 out of 8 (75%) images with normal antecedent precipitation showed signatures of saturation(C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 22
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Setaria faberi	**20**	☒	**FACU**
2. Capsella bursa-pastoris	**18**	☒	**FACU**
3. Veronica peregrina	12	☐	FACW
4. Amaranthus tuberculatus	8	☐	OBL
5. Plantago rugelii	5	☐	FAC
6. Solidago altissima	5	☐	FACU
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	68	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	00	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Old field/agricultural field.

SOIL

Sampling Point: 22

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	5Y 2.5/1	100					Clay loam	
13-18	2.5Y 4/2	40	10YR 4/6	60	C	PL M	Clay loam	with gravel
18-24	5Y 4/2	85	10YR 4/6	15	C	PL M	Clay loam	with gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☒ **Crayfish Burrows (C8)**
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 19

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary indicator of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 23
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Cyperus esculentua	**30**	☒	**FACW**
2. Veronica peregrina	**25**	☒	**FACW**
3. Typha angustifolia	10	☐	OBL
4. Equisetum arvense	8	☐	FAC
5. Rorripa palustris	7	☐	OBL
6. Eleocharis obtusa	5	☐	OBL
7. Plantago rugelii	5	☐	FAC
8. Juncus bufonius	3	☐	FACW
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	93	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 23

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	5Y 2.5/1	100					Clay loam	
9-18	2.5Y 4/2	65	10YR 5/8	35	C	PL M	Clay loam	with gravel
18-28	5Y 4/1	60	7.5YR 4/6	40	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ **Depleted Matrix (F3)**
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 23.5

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 13

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area B (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 6 out of 8 (75%) images with normal antecedent precipitation showed signatures of saturation (C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 24
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): slight toeslope Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**30**	☒	**FAC**
2. Thlaspi arvense	**15**	☒	**FACU**
3. Veronica peregrina	**15**	☒	**FACW**
4. Echinochloa crus-galii	10	☐	FACW
5. Amaranthus tuberculatus	8	☐	OBL
6. Rorripa palustris	5	☐	OBL
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	83	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Old field/agricultural field.

SOIL

Sampling Point: 24

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	100					Clay loam	
9-11	2.5Y 3/1	93	10YR 3/3	7	C	PL M	Clay loam	
11-18	5Y 5/2	85	10YR 3/4	15	C	PL M	Clay loam	
18-24	10Y 5/1	80	10YR 5/8	20	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____

Depth (inches): ____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): ____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): ____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 22

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The Geomorphic Position (D2) indicator does not apply due a drain tile system. Only one secondary indicator of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 25
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Houghton muck (HtA NWI classification: F0Kf
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☒ **Yes** ☐No
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☒**Yes**	☐No		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**30**	☒	**FAC**
2. Veronica peregrina	**20**	☒	**FACW**
3. Echinochloa crus-galii	15	☐	FACW
4. Juncus torreyi	12	☐	FACW
5. Rorripa palustris	10	☐	OBL
6. Juncus dudleyi	8	☐	FACW
7. Typha angustifolia	5	☐	OBL
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	100	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 25

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-27	N 2.5/	100					Muck	
27-28	7.5YR 2.5/1	100					Peaty muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☒ **Histosol (A1)**
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 18

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 11

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area C (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 5 out of 8 (63%) images with normal antecedent precipitation showed signatures of saturation (C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 26
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**35**	☒	**FAC**
2. Chenopodium album	**20**	☒	**FACU**
3. Amaranthus tuberculatus	15	☐	OBL
4. Plantago rugelii	12	☐	FAC
5. Rorripa palustris	10	☐	OBL
6. Veronica peregrina	10	☐	FACW
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	102	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Old field/agricultural field.

SOIL

Sampling Point: 26

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 2/1	100					Silt loam	
14-24	5Y 4/2	40	7.5YR 3/4	60	C	PL M	Sandy clay loam	with gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 21

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 27
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): swale (depression) Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Rorripa palustris	**35**	☒	**OBL**
2. Panicum capillare	**20**	☒	**FAC**
3. Veronica peregrina	15	☐	FACW
4. Persicaria lapathifolia	10	☐	FACW
5. Solidago altissima	5	☐	FACU
6. Thlaspi arvense	3	☐	FACU
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	88	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 27

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 2.5/1	100					Silty clay loam	
8-18	5Y 4/1	70	10YR 3/4	30	C	PL M	Clay loam	
18-25	5Y 5/1	85	7.5YR 3/4	15	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ **Depleted Matrix (F3)**
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 25

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 15

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area C (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 5 out of 8 (63%) images with normal antecedent precipitation showed signatures of saturation (C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 28
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**30**	☒	**FAC**
2. Rorripa palustris	**20**	☒	**OBL**
3. Echinochloa crus-galli	15	☐	FACW
4. Veronica peregrina	12	☐	FACW
5. Amaranthus tuberculatus	10	☐	OBL
6. Solidago altissima	5	☐	FACU
7. Thlaspi arvense	3	☐	FACU
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	95	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 28

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-15	10YR 2/1	100					Silty clay loam	
15-25	10Y 5/1	60	10YR 3/6	40	C	PL M	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 21

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 18

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area C (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 5 out of 8 (63%) images with normal antecedent precipitation showed signatures of saturation (C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 08/28/2019
Applicant/Owner: _____ State: WI Sampling Point: 29
Investigator(s): Chris Jors, Jen Dietl, Dan Carter; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**50**	☒	**FAC**
2. Amaranthus tuberculatus	12	☐	OBL
3. Veronica peregrina	10	☐	FACW
4. Solidago altissima	6	☐	FACU
5. Rorripa palustris	5	☐	OBL
6. Xanthium strumarium	2	☐	FAC
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	85	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Old field/agricultural field.

SOIL

Sampling Point: 29

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-17	10YR 2/1	100					Loam	
17-24	2.5Y 4/2	30	10YR 4/6	70	C	PL M	Sandy clay loam	with gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 22

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary indicator of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 30 & Probe 2
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: none
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal. Probe site 2 was inspected west of sample site 30 to inform the wetland boundary in that area. Equisetum hyemale (FACW) was dominant. Hydric soils were present and saturation was observed at 11" with a water table at 14". Given that all three wetland parameters were present, Probe site 2 was determined to be in wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Rorripa palustris	**25**	☒	**OBL**
2. Veronica peregrina	**20**	☒	**FACW**
3. Hibiscus trionum	**18**	☒	**NI (UPL)**
4. Cyperus esculentus	15	☐	FACW
5. Echinochloa crusgalli	10	☐	FACW
6. Typha angustifolia	10	☐	OBL
7. Juncus dudleyi	3	☐	FAC
8. Alisma subcordatum	2	☐	OBL
9. Cirsium arvense	1	☐	FACU
10. _____	_____	☐	_____
	104	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 30

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	95	10YR 5/4	5	C	PL M	Silty clay loam	
6-13	10YR 3/1	85	10YR 4/6	10	C	PL M	Clay loam	
			5Y 5/1	5	D	M		
13-24	5GY 6/1	75	10YR 5/6	25	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☒ **Algal Mat or Crust (B4)**
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☒ **Recent Iron Reduction in Tilled Soils (C6)**
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 20

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area C (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 5 out of 8 (63%) images with normal antecedent precipitation showed signatures of saturation (C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 31
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ashkum silty clay loam (AsA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**25**	☒	**FAC**
2. Veronica peregrina	**20**	☒	**FACW**
3. Erigeron canadense	**18**	☒	**FACU**
4. Thlaspi arvense	15	☐	FACU
5. Solidago altissima	10	☐	FACU
6. Echinochloa crus-galli	6	☐	FACW
7. Cirsium arvense	5	☐	FACU
8. Rorripa palustris	5	☐	OBL
9. Amaranthus tuberculatus	2	☐	OBL
10. Typha angustifolia	1	☐	OBL
	107	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) The sample site area has been fallow for one year, but has been recently herbicided. Agricultural field.

SOIL

Sampling Point: 31

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100					Loam	
6-14	10YR 3/1	95	7.5YR 3/4	5	C	PL M	Loam	
14-24	2.5Y 6/2	50	10YR 5/8	50	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 14

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary wetland hydrology indicator observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 32
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Pella silt loam (Ph) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Veronica peregrina	**25**	☒	**FACW**
2. Juncus dudleyi	**20**	☒	**FACW**
3. Rorripa palustris	**15**	☒	**OBL**
4. Typha angustifolia	12	☐	OBL
5. Cyperus esculentus	10	☐	FACW
6. Amaranthus tuberculatus	5	☐	OBL
7. Lythrum salicaria	5	☐	OBL
8. Mimulus ringens	5	☐	OBL
9. Abutilon theophrasti	3	☐	FACU
10. Chenopodium album	2	☐	FACU
	102	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation has recently been herbicided but was still able to be identified. Atypical (farmed) wetland/fresh (wet) meadow.

SOIL

Sampling Point: 32

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/1	100					Silty clay loam	
5-12	N 2.5/	80	2.5Y 5/4	5	C	PL M	Clay loam	
	5Y 4/1	10	2.5Y 6/2	5	C	PL M		
12-27	5Y 6/1	88	5YR 5/6	12	C	PL M	Sandy clay loam	with dolomite

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 26

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area C (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 5 out of 8 (63%) images with normal antecedent precipitation showed signatures of saturation (C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 33
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Pella silt loam (Ph) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**12**	☒	**FAC**
2. Chenopodium album	**10**	☒	**FACU**
3. Erigeron canadense	5	☐	FACU
4. Rorripa palustris	2	☐	OBL
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	29	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

Remarks: (Include photo numbers here or on a separate sheet.) The sample site area had been recently plowed and herbicided, but the vegetation was able to be identified. Agricultural field.

SOIL

Sampling Point: 33

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100					Loam	
6-9	10YR 3/1	98	7.5YR 3/3	2	C	PL M	Loam	
9-13	10YR 2/1	100					Loam	
13-26	5Y 5/1	75	10YR 5/6	25	C	PL M	Clay loam	with dolomite and gravel

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 24.5

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 13

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 34
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Pella silt loam (Ph) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**25**	☒	**FAC**
2. Thlaspi arvense	**15**	☒	**FACU**
3. Veronica peregrina	**15**	☒	**FACW**
4. Erigeron canadense	12	☐	FACU
5. Rorripa palustris	12	☐	OBL
6. Cirsium vulgare	10	☐	FACU
7. Daucus carota	5	☐	UPL
8. Juncus dudleyi	5	☐	FACW
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	99	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) The sample site area was recently herbicided, but the vegetation as still able to be identified. Agricultural field.

SOIL

Sampling Point: 34

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	2.5Y 3/1	95	10YR 5/6	5	C	PL M	Loam	
5-11	2.5Y 2.5/1	95	7.5YR 3/4	5	C	PL M	Loam	
11-28	10YR 6/2	85	10YR 5/4	15	C	PL M	Loamy sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 23.5

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 19

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary wetland hydrology indicator observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 35
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: E2Ka
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	**45**	☒	**FACW**
2. Agrostis gigantea	**20**	☒	**FACW**
3. Solidago gigantea	**15**	☒	**FACW**
4. Symphyotrichum puniceum	12	☐	OBL
5. Cyperus esculentus	10	☐	FACW
6. Juncus dudleyi	10	☐	FACW
7. Solidago altissima	10	☐	FACU
8. Equisetum hyemale	5	☐	FACW
9. Lobelia siphilitica	5	☐	OBL
10. Panicum capillare	5	☐	FAC
	137	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Fresh (wet) meadow.

SOIL

Sampling Point: 35

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-13	10YR 2/1	100					Silt loam	
13-19	10YR 5/2	90	10YR 4/6	5	C	PL M	Clay loam	
	10YR 2/1	5						
19-28	10YR 5/2	70	7.5YR 5/6	30	C	PL M	Loamy sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☒ **Crayfish Burrows (C8)**
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 25

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: While the sample site is in a depressional idle area, it is very close to the edge of an agricultural field served by drain tiles. Therefore, geomorphic position (D2) has not been checked.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 36
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: F0Kf
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes** ☐ No
Hydric Soils Present?	☒ **Yes**	☐ No		
Wetland Hydrology Present?	☒ **Yes**	☐ No		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Echinochloa crus-galli	**40**	☒	**FACW**
2. Panicum capillare	**20**	☒	**FAC**
3. Persicaria lapathifolia	**20**	☒	**FACW**
4. Rorripa palustris	15	☐	OBL
5. Veronica peregrina	15	☐	FACW
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	110	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) The sample site was mostly herbicided, but the vegetation could still be identified. Atypical (farmed) wetland.

SOIL

Sampling Point: 36

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	92	10YR 5/1	5	D	M	Clay loam	
			10YR 5/4	3	C	PL M		
6-11	5Y 4/1	80	10YR 4/6	15	C	PL M	Clay loam	
	10YR 2/1	5						
11-28	10GY 6/1	80	10YR 4/6	20	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☒ **Loamy Gleyed Matrix (F2)**
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☒ **Recent Iron Reduction in Tilled Soils (C6)**
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 21

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area C (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 5 out of 8 (63%) images with normal antecedent precipitation showed signatures of saturation (C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 37
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: *None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal. *Sample site is immediately outside the WWI-mapped wetland boundary.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Thlaspi arvense	**25**	☒	**FACU**
2. Veronica peregrina	**18**	☒	**FACW**
3. Cirsium arvense	**15**	☒	**FACU**
4. Echinochloa crus-galli	**15**	☒	**FAC**
5. Rorripa palustris	12	☐	OBL
6. Erigeron canadense	10	☐	FACU
7. Panicum capillare	5	☐	FAC
8. Setaria faberi	5	☐	FACU
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	105	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

Remarks: (Include photo numbers here or on a separate sheet.) Agricultural field.

SOIL

Sampling Point: 37

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 2/1	100					Clay loam	
11-24	5GY 6/1	80	10YR 5/6	20	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 21

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 38
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear
Slope (%): 1-3% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Matherton silt loam (MmA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**30**	☒	**FAC**
2. Veronica peregrina	**25**	☒	**FACW**
3. Rorripa palustris	20	☐	OBL
4. Persicaria lapathifolia	15	☐	FACW
5. Thlaspi arvense	10	☐	FACU
6. Amaranthus tuberculatus	5	☐	OBL
7. Plantago rugelii	3	☐	FAC
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	108	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Vegetation at the sample site had been herbicided but could still be identified. Agricultural field.

SOIL

Sampling Point: 38

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-6	2.5Y 2.5/1	100					Clay loam	
6-10	10YR 2/1	83	7.5YR 4/6	7	C	PL M	Clay loam	Plow layer
			5Y 5/1	10	D	M		
10-18	5GY 5/1	75	5YR 4/6	25	C	PL M	Clay loam	
18-27	5Y 5/1	80	10YR 4/4	20	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☒ **Loamy Gleyed Matrix (F2)**
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☒ **Depleted Dark Surface (F7)**
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 25.5

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 18

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary indicator of wetland hydrology observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 39/Probe 3
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Houghton muck (HtA) NWI classification: F0Kf
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal. Probe site 3 was inspected north of sample site 39 to inform the wetland boundary in that area. Hydric soils and hydrophytic vegetation were both present. Further, wetland hydrology was present (saturation at 8" and a water table at 20"). Given that all three wetland parameters were present, Probe 3 was determined to be in wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**15**	☒	**FAC**
2. Rorripa palustris	**10**	☒	**OBL**
3. Amaranthus tuberculatus	5	☐	OBL
4. Persicaria lapthifolia	3	☐	FACW
5. Plantago rugelii	3	☐	FAC
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	36	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Sample site was herbicided and plowed, but vegetation could still be identified. Atypical (farmed) wetland.

SOIL

Sampling Point: 39

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-7	10YR 2/1	100					Loam	
7-26	2.5Y 6/1	90	10YR 5/6	10	C	PL M	Loamy fine sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 23.5

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area C (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 5 out of 8 (63%) images with normal antecedent precipitation showed signatures of saturation (C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 40
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: F0Kf
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?** ☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**	
Wetland Hydrology Present?	☐Yes	☒**No**	

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**45**	☒	**FAC**
2. Rorripa palustris	**25**	☒	**OBL**
3. Veronica peregrina	10	☐	FACW
4. Amaranthus tuberculatus	6	☐	OBL
5. Erigeron canadense	5	☐	FACU
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	91	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Sample site area had been herbicided, but vegetation could still be identified. Agricultural field.

SOIL

Sampling Point: 40

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-11	10YR 2/1	100					Loam	
11-24	10YR 2/1	60	2.5Y 6/2	30	D	M	Loam	
			10YR 4/6	10	C			

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 17

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary wetland hydrology indicator observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 41
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Houghton muck (HtA) NWI classification: F0Kf
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes** ☐ No
Hydric Soils Present?	☒ **Yes**	☐ No		
Wetland Hydrology Present?	☒ **Yes**	☐ No		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Rorripa palustris	**20**	☒	**OBL**
2. Panicum capillare	**10**	☒	**FAC**
3. Cyperus esculentus	5	☐	FACW
4. Echinochloa crus-galli	5	☐	FACW
5. Amaranthus tuberculatus	3	☐	OBL
6. Juncus bufonius	3	☐	FACW
7. Typha angustifolia	2	☐	OBL
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	48	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Sample site area was recently herbicided and plowed, but vegetation could still be identified. Atypical (farmed) wetland.

SOIL

Sampling Point: 41

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	N 2.5/	100					Muck	
10-11	N 2.5/	100					Muck	with metallic gold flecks (fertilizer residue??)
11-15	2.5Y 4/2	93	2.5Y 5/6	5	C	PL M	Clay loam	
			10Y 5/1	2	D	M		
15-26	5Y 5/1	85	10YR 5/6	15	C	PL M	Clay loam	with dolomite, gravel, and "glitter"

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☒ **Histic Epipedon (A2)**
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☒ **2 cm Muck (A10)**
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 24

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area D (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 6 out of 8 (75%) images with normal antecedent precipitation showed signatures of saturation (C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 42
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Houghton muck (HtA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Abutilon theophrasti	**10**	☒	**FACU**
2. Panicum capillare	**8**	☒	**FAC**
3. Rorripa palustris	**7**	☒	**OBL**
4. Erigeron canadense	5	☐	FACU
5. Plantago rugelii	3	☐	FAC
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	33	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Agricultural field.

SOIL

Sampling Point: 42

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-11	N 2.5/	100					Loam	
11-25	2.5Y 5/2	85	10YR 5/6	10	C	PL M	Clay loam	with dolomite
			N 5/	5	D			

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 24.5

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 14

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 43/Probe 4
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Houghton muck (HtA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal. Probe site 4 was inspected northeast of sample site 43 to inform the wetland boundary in that area. Hydric soils and hydrophytic vegetation were both present. Further, wetland hydrology was present (saturation at 11" and water table at 23"). Given that all 3 wetland parameters were present, probe 4 was determined to be in wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Veronica peregrina	**35**	☒	**FACW**
2. Panicum capillare	**30**	☒	**FAC**
3. Rorripa palustris	15	☐	OBL
4. Amaranthus tuberculatus	10	☐	OBL
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	90	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Atrypical (farmed) wetland.

SOIL

Sampling Point: 43

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	2.5Y 2.5/1	100					Silty clay loam	
8-13	2.5Y 2.5/1	95	10YR 4/6	5	C	PL M	Clay loam	
13-18	2.5Y 5/1	90	10YR 4/6	10	C	PL M	Clay loam	
18-25	5GY 5/1	65	10YR 4/6	30	C	PL M	Clay loam	with dolomite
			2.5Y 7/8	5	C	PL M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☒ **Surface Soil Cracks (B6)**
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☒ **Crayfish Burrows (C8)**
- ☒ **Saturation Visible on Aerial Imagery (C9)**
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 16

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial photos (Exhibit 4), and Image review Area D (Exhibits 12, 13, and 14).

Remarks: The image review indicated that 6 out of 8 (75%) images with normal antecedent precipitation showed signatures of saturation (C9). The Geomorphic Position (D2) indicator does not apply due a drain tile system.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/04/2019
Applicant/Owner: _____ State: WI Sampling Point: 44
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Houghton muck (HtA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Panicum capillare	**20**	☒	**FAC**
2. Erigeron canadense	**18**	☒	**FACU**
3. Amaranthus tuberculatus	**15**	☒	**OBL**
4. Veronica peregrina	**15**	☒	**FACW**
5. Rorripa palustris	10	☐	OBL
6. Cirsium arvense	8	☐	FACU
7. Thlaspi arvense	8	☐	FACU
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	94	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Agricultural field.

SOIL

Sampling Point: 44

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10 YR 3/1	100					Clay loam	
12-18	2.5Y 4/1	90	10YR 5/6	10	C	PL M	Clay loam	
18-25	10GY 6/1	40	10YR 4/6	60	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 24

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary wetland hydrology indicator observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 45
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Wet alluvial land (Ww) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharum	**60**	☒	**FACU**
2. Rhamnus cathartica	15	☐	FAC
3. Fraxinus pennsylvanica (dying)	10	☐	FACW
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	85	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rhamnus cathartica	**95**	☒	**FAC**
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	95	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Rhamnus cathartica	**25**	☒	**FAC**
2. Alliaria petiolata	**15**	☒	**FAC**
3. Circaea canadensis	10	☐	FACU
4. Hesperis matronalis	5	☐	FACU
5. Geum canadense	3	☐	FAC
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	58	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Buckthorn thicket and hardwoods.

SOIL

Sampling Point: 45

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/1	100					Silt loam	
6-13	10YR 2/1	95	10YR 3/4	5	C	PL M	Loam	
13-18	10YR 2/1	80	5YR 3/4	8	C	PL M	Clay loam	
	5Y 4/2	12						
18-25	10YR 6/2	85	7.5YR 4/6	15	C	PL M	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 18

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 46
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Wet alluvial land (Ww) NWI classification: S3/E2K
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes** ☐ No
Hydric Soils Present?	☒ **Yes**	☐ No		
Wetland Hydrology Present?	☒ **Yes**	☐ No		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica (dying)	**20**	☒	**FACW**
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	20	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rhamnus cathartica	**25**	☒	**FAC**
2. Frangula alnus	**20**	☒	**FACW**
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	45	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Impatiens capensis	**25**	☒	**FACW**
2. Epilobium coloratum	**12**	☒	**OBL**
3. Rhamnus cathartica	10	☐	FAC
4. Geum canadense	5	☐	FAC
5. Solanum dulcamara	5	☐	FAC
6. Symphyotrichum lateriflorum	3	☐	FACW
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	60	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Shrub-carr (buckthorn thicket) along the edge of fresh (wet) meadow.

SOIL

Sampling Point: 46

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	2.5Y 2.5/1	100					Silty clay loam	
7-14	2.5Y 2.5/1	94	10YR 3/4	6	C	PL M	Silty clay loam	
14-20	5Y 4/1	90	7.5YR 4/6	10	C	PL M	Clay loam	
20-26	5Y 5/1	90	10YR 4/6	10	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☒ **Water marks (B1)**
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 20

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 47
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Wet alluvial land (Ww) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus pennsylvanica (dying)	**15**	☒	**FACW**
2. Morus alba	**10**	☒	**FAC**
3. Rhamnus cathartica	5	☐	FAC
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	30	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rhamnus cathartica	**95**	☒	**FAC**
2. Fraxinus pennsylvanica	5	☐	FACW
3. Juniperus virginiana	3	☐	FACU
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	103	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Rhamnus cathartica	**80**	☒	**FAC**
2. Glechoma hederacea	10	☐	FACU
3. Geum canadense	3	☐	FAC
4. Solanum dulcamara	2	☐	FAC
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	95	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. Vitis riparia	3	☐	FACW
2. _____	_____	☐	_____
	3	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Buckthorn thicket.

SOIL

Sampling Point: 47

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-7	2.5Y 2.5/1	100					Silt loam	
7-13	2.5Y 2.5/1	95	10YR 4/3	5	C	PL M	Silt loam	
13-27	10YR 5/2	80	10YR 5/6	20	C	PL M	Silty clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary wetland hydrology indicator observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 48
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Wet alluvial land (Ww) NWI classification: S3/E2K
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☒ **Yes** ☐No
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☒**Yes**	☐No		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Rhamnus cathartica	**20**	☒	**FAC**
2. Fraxinus pennsylvanica (dying)	**5**	☒	**FACW**
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	25	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rhamnus cathartica	**90**	☒	**FAC**
2. Fraxinus pennsylvanica	5	☐	FACW
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	95	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Rhamnus cathartica	**10**	☒	**FAC**
2. Solanum dulcamara	**5**	☒	**FAC**
3. Ribes americanum	3	☐	FACW
4. _____	_____	☐	_____
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	18	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Shrub-carr (buckthorn thicket).

SOIL

Sampling Point: 48

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-17	10YR 2/1	100					Silt loam	
17-24	2.5Y 6/2	85	10YR 5/6	15	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☒ **Other (Explain in Remarks)**

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 32

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 17

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Trees and shrubs exhibited morphological adaptions to wet conditions, e.g. multiple stems, shallow roots as seen in Exhibit 11, Photo 36.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 49
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): depression (constructed roadside swale) Local relief (concave, convex, none): linear, concave
Slope (%): 1-3% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Martinton silt loam (MgA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes** ☐ No
Hydric Soils Present?	☒ **Yes**	☐ No		
Wetland Hydrology Present?	☒ **Yes**	☐ No		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Agrostis stolonifera	**50**	☒	**FACW**
2. Poa pratensis	**20**	☒	**FAC**
3. Glechoma hederacea	10	☐	FACU
4. Trifolium repens	10	☐	FACU
5. Plantago major	5	☐	FAC
6. Rumex crispus	5	☐	FAC
7. Taraxacum officinale	3	☐	FACU
8. Carex vulpinoidea	2	☐	FACW
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	105	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Atypical (mowed) wetland within a constructed roadside swale.

SOIL

Sampling Point: 49

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	93	10YR 4/6	7	C	PL M	Silty clay loam	fill material
8-16	N 2.5/	93	7.5YR 3/4	7	C	PL M	Clay loam	
16-19	10YR 4/1	65	10YR 4/6	15	C	PL M	Clay loam	
	N 2.5/	20						
19-26	2.5Y 5/2	75	10YR 5/6	20	C	PL M	Sandy clay loam	
			10GY 6/1	5	D	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 22

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 3

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 50
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope (sideslope of constructed swale) Local relief (concave, convex, none): linear
Slope (%): 1-3% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Martinton silt loam (MgA) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐Yes	☒**No**	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Poa pratensis	**40**	☒	**FAC**
2. Medicago lupulina	**20**	☒	**FACU**
3. Plantago lanceolata	15	☐	FACU
4. Glechoma hederacea	10	☐	FACU
5. Schedonorus arundinaceus	10	☐	FACU
6. Trifolium repens	5	☐	FACU
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	100	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☐ 2 - Dominance Test is >50%
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ☐ **No** ☒

Remarks: (Include photo numbers here or on a separate sheet.) Mowed lawn.

SOIL

Sampling Point: 50

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	92	10YR 4/6	3	C	PL M	Silty clay loam	fill material with gravel
	10YR 4/2	5						
10-18	10YR 4/2	94	10YR 4/6	6	C	PL M	Clay loam	
18+								Refusal: Rock/gravel fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ **Depleted Matrix (F3)**
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks: While multiple hydric soil indicators were met, they were observed in fill material that did not originate in this location.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 18

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 51
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): lineaer
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Wet alluvial land (Ww) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Rhamnus cathartica	**10**	☒	**FAC**
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	10	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rhamnus cathartica	**30**	☒	**FAC**
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	30	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Physalis alkekengi	**25**	☒	**NI (UPL)**
2. Impatiens capensis	**20**	☒	**FACW**
3. Solidago gigantea	15	☐	FACW
4. Hesperis matronalis	10	☐	FACU
5. Rhamnus cathartica	5	☐	FAC
6. Solanum dulcamara	5	☐	FAC
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	80	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. Vitis riparia	**5**	☒	**FACW**
2. _____	_____	☐	_____
	5	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Buckthorn thicket.

SOIL

Sampling Point: 51

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/1	100					Sandy loam	
16-26	10YR 4/1	60	10YR 3/6	10	C	PL M	Loamy fine sand	
	10YR 5/2	30						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 16

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Only one secondary wetland hydrology indicator observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 52
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Wet alluvial land (Ww) NWI classification: S3/E2K
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes** ☐ No
Hydric Soils Present?	☒ **Yes**	☐ No		
Wetland Hydrology Present?	☒ **Yes**	☐ No		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. **Fraxinus pennsylvanica (dying)**	**20**	☒	**FACW**
2. **Acer negundo**	**10**	☒	**FAC**
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	30	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. **Cornus alba**	**30**	☒	**FACW**
2. **Rhamnus cathartica**	**15**	☒	**FAC**
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	45	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. **Impatiens capensis**	**40**	☒	**FACW**
2. **Cornus alba**	**10**	☒	**FAC**
3. **Rhamnus cathartica**	**10**	☒	**FAC**
4. Solanum dulcamara	8	☐	FAC
5. Hesperis matronalis	5	☐	FACU
6. Physalis alkekengi	5	☐	NI (UPL)
7. Ribes americanum	5	☐	FACW
8. Symphyotrichum lateriflorum	3	☐	FACW
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	86	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. **Vitis riparia**	**15**	☒	**FACW**
2. _____	_____	☐	_____
	15	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Fresh (wet) meadow and shrub-carr with scattered lowland hardwoods.

SOIL

Sampling Point: 52

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	100					Loam	
9-16	2.5Y 5/1	80	10YR 5/6	20	C	PL M	Clay loam	
16-28	2.5Y 5/2	85	10YR 5/6	15	C	PL M	Loamy fine sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ **Depleted Matrix (F3)**
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 22

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 53
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Wet alluvial land (Ww) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Catalpa sp. (planted)	**10**	☒	**FACU**
2. Picea pungens	1	☐	NI (UPL)
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	11	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Agrostis gigantea	**30**	☒	**FACW**
2. Poa pratensis	**30**	☒	**FAC**
3. Setaria pumila	**20**	☒	**FAC**
4. Glechoma hederacea	15	☐	FACU
5. Schoenoplectus pungens	15	☐	OBL
6. Prunella vulgaris	5	☐	FAC
7. Plantago major	3	☐	FAC
8. Taraxacum officinale	3	☐	FACU
9. Carex sp.	1	☐	NI
10. _____	_____	☐	_____
	122	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Atypical (mowed) wetland.

SOIL

Sampling Point: 53

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-3	2.5Y 2.5/1	100					Silt loam	
3-21	10YR 5/2	90	10YR 3/6	10	C	PL M	Sand	
21-23	10Y 4/1	80	10YR 4/6	20	C	PL M	Sandy clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☒ **Sandy Redox (S5)**
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks: S5 ???

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☒ **High Water Table (A2)**
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☒ **Oxidized Rhizospheres on Living Roots (C3)**
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 11

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: Oxidized rhizospheres starting at 3 inches below the surface. The sample site is in a depression in the FEMA-mapped one-percent-annual-probability floodplain of Big Muskego Lake.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 54
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Wet alluvial land (Ww) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?** ☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**	
Wetland Hydrology Present?	☐Yes	☒**No**	

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Setaria pumila	**25**	☒	**FAC**
2. Cirsium arvense	**18**	☒	**FACU**
3. Verbena hastata	**15**	☒	**FACW**
4. Ambrosia artemisiifolia	10	☐	FACU
5. Schoenoplectus pungens	10	☐	OBL
6. Daucus carota	8	☐	UPL
7. Phalaris arundinacea	8	☐	FACW
8. Oenothera biennis	5	☐	FACU
9. Symphyotrichum pilosum	3	☐	FACU
10. Xanthium strumarium	3	☐	FAC
	105	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Edge of mowed lawn/gravel driveway.

SOIL

Sampling Point: 54

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-12	10YR 3/1	50					Silt loam	with 50% mulch/gravel fill
12+								Refusal: Gravel fill

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel fill

Depth (inches): 12

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site lies within the FEMA-mapped one-percent-annual-probability floodplain of Big Muskego Lake, but geomorphic position (D2) is not checked as the site is an elevated, convex slope containing fill material. No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 55
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Wet alluvial land (Ww) NWI classification: T3K
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	**30**	☒	**FAC**
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	30	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Frangula alnus	**40**	☒	**FACW**
2. Rhamnus cathartica	**40**	☒	**FAC**
3. Populus tremuloides	5	☐	FAC
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	85	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Rhamnus cathartica	**50**	☒	**FAC**
2. Frangula alnus	**30**	☒	**FACW**
3. Circaea canadensis	15	☐	FACU
4. Symphyotrichum lateriflorum	10	☐	FACW
5. Carex grisea	5	☐	FAC
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	110	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. Vitis riparia	**10**	☒	**FACW**
2. _____	_____	☐	_____
	10	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Shrub-carr (buckthorn thicket).

SOIL

Sampling Point: 55

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100					Silt loam	
6-18	5Y 5/2	90	10YR 5/6	10	C	PL M	Clay loam	
18-20	N 2.5/	95	7.5YR 3/4	5	C	PL M	Mucky loam	
20-26	2.5Y 5/2	92	10YR 4/6	8	C	PL M	Loamy sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ **Depleted Matrix (F3)**
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 23

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 10

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site lies in a depression within the FEMA-mapped one-percent-annual-probability floodplain of Big Muskego Lake.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 56
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Wet alluvial land (Ww) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Rhamnus cathartica	**30**	☒	**FAC**
2. Populus tremuloides	**10**	☒	**FAC**
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	40	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rhamnus cathartica	**70**	☒	**FAC**
2. Frangula alnus	10	☐	FACW
3. Viburnum lentago	5	☐	FAC
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	85	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Rhamnus cathartica	**60**	☒	**FAC**
2. Circaea canadensis	10	☐	FACU
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	70	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Buckthorn thicket.

SOIL

Sampling Point: 56

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-19	10YR 3/2	100					Sandy loam	
19-24	10YR 5/2	95	10YR 4/6	5	C	PL M	Loamy sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 18

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is in the FEMA-mapped one-percent-annual-probability floodplain of Big Muskego Lake, but geomorphic position (D2) is not checked as the site is on a sandy, well drained shallow slope. No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 57
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?** ☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**	
Wetland Hydrology Present?	☐Yes	☒**No**	

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. **Populus deltoides**	**35**	☒	**FAC**
2. **Picea glauca**	**10**	☒	**FACU**
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	45	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. **Rhamnus cathartica**	**80**	☒	**FAC**
2. Fraxinus pennsylvanica	5	☐	FACW
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	85	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. **Rhamnus cathartica**	**35**	☒	**FAC**
2. **Toxicodendron radicans**	**10**	☒	**FAC**
3. Symphyotrichum lateriflorum	5	☐	FACW
4. _____	_____	☐	_____
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	50	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) All Fraxinus pennsylvanica (FACW) trees in the sample plot were dead. Buckthorn thicket with hardwoods.

SOIL

Sampling Point: 57

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-10	10YR 3/1	100					Silt loam	
10-17	2.5Y 5/2	100					Loamy sand	
17-18	N 2.5/	100					Muck	
18-25	10YR 2/1	100					Loamy sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 58
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: T3K
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes**	☐ No
Hydric Soils Present?	☒ **Yes**	☐ No			
Wetland Hydrology Present?	☒ **Yes**	☐ No			

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Rhamnus cathartica	**15**	☒	**FAC**
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	15	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rhamnus cathartica	**65**	☒	**FAC**
2. Fraxinus pennsylvanica	10	☐	FACW
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	75	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Rhamnus cathartica	**40**	☒	**FAC**
2. Carex grisea	5	☐	FAC
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	45	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) All Fraxinus pennsylvanica (FACW) trees are dead. Shrub-carr (buckthorn thicket).

SOIL

Sampling Point: 58

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-9	N 2.5/	100					Silt loam	
9-15	2.5Y 2.5/1	95	7.5YR 3/3	5	C	PL M	Sandy loam	
15-25	10Y 5/1	80	10YR 5/6	20	C	PL M	Clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ **Water-Stained Leaves (B9)**
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 23.5

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks:

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 59
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): dredged channel Local relief (concave, convex, none): linear, concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: W0Hx
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☒ **Yes** ☐No
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☒**Yes**	☐No		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Lemna minor	**5**	☒	**OBL**
2. Persicaria amphibia	**5**	☒	**OBL**
3. Persicaria lapathifolia	**3**	☒	**FACW**
4. Ranunculus sceleratus	2	☐	OBL
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	15	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Shallow marsh and open water.

SOIL

Sampling Point: 59

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☒ **Other (Explain in Remarks)**

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ____

Depth (inches): ____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks: Soils inundated with 4 inches of water, hydric by definition - Criteria 3.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☒ **Surface Water (A1)**
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☒ **Inundation Visible on Aerial Imagery (B7)**
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? **Yes** ☒ No ☐ Depth (inches): 4

Water Table Present? Yes ☐ No ☐ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ☐ No ☐ Depth (inches): ____

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is in a dredged channel within the FEMA-mapped one-percent-annual-probability floodplain of Big Muskego Lake.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 60
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NW 1/4 Section 13, T5N, R20E
Landform (hillslope, terrace, etc.): shoulder slope Local relief (concave, convex, none): convex
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: T3K/W0Hx
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☒**Yes**	☐No		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	☐	_____
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rhamnus cathartica	**75**	☒	**FAC**
2. Zanthoxyllum americanum	**40**	☒	**FACU**
3. Fraxinus pennsylvanica	5	☐	FACW
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	120	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Rhamnus cathartica	**60**	☒	**FAC**
2. Zanthoxyllum americanum	15	☐	FACU
3. Equisetum arvesne	10	☐	FAC
4. Carex sp.	5	☐	NI
5. Fragaria virginiana	5	☐	FACU
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	95	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. Vitis riparia	**10**	☒	**FACW**
2. _____	_____	☐	_____
	10	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Fraxinus pennsylvanica trees in the sample plot are dead. Thicket.

SOIL

Sampling Point: 60

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-17	10YR 2/1	100					Silt loam	
17-24	2.5Y 5/2	80	10YR 4/6	20	C	PL M	Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☒ **Thick Dark Surface (A12)**
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 17

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site lies immediately outside the mapped floodplain boundary, geomophic position (D2) is not checked as it is on a convex hillslope. No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 61
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: T3K
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒**Yes**	☐No	**Is the Sampled Area within a Wetland?**	☐ Yes ☒**No**
Hydric Soils Present?	☐Yes	☒**No**		
Wetland Hydrology Present?	☐Yes	☒**No**		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Rhamnus cathartica	**10**	☒	**FAC**
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	10	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rhamnus cathartica	**60**	☒	**FAC**
2. _____	_____	☐	_____
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	60	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. Rhamnus cathartica	**25**	☒	**FAC**
2. Parthenocissus inserta	8	☐	FACU
3. Circaea canadensis	5	☐	FACU
4. Taraxacum officinale	3	☐	FACU
5. _____	_____	☐	_____
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	41	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	_____	x 3 =	_____
FACU species	_____	x 4 =	_____
UPL species	_____	x 5 =	_____
Column Totals:	_____ (A)		_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ **2 - Dominance Test is >50%**
☐ 3 - Prevalence Index is ≤3.0[1]
☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Buckthorn thicket.

SOIL

Sampling Point: 61

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/2	100					Silt loam	
6-12	10YR 4/3	80	10YR 4/6	20	C	PL M	Silty clay loam	
12+								Refusal: Fill material

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Fill material

Depth (inches): 12

Hydric Soil Present? Yes ☐ **No** ☒

Remarks: No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? Yes ☐ **No** ☒ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ☐ **No** ☒ Depth (inches): _____

Wetland Hydrology Present? Yes ☐ **No** ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The site is in the FEMA-mapped one-percent-annual-probability floodplain of Big Muskego Lake, but geomorphic position (D2) does not apply as the site in a convex area consisting of fill material. No wetland hydrology indicators observed.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Lynn Kurer and Wayne Bushberger Properties City/County: City of Muskego/Waukesha County Sampling Date: 09/05/2019
Applicant/Owner: _____ State: WI Sampling Point: 62
Investigator(s): Chris Jors, Jen Dietl, Shane Heyel; SEWRPC Section, Township, Range: NE 1/4 Section 14, T5N, R20E
Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave
Slope (%): 0-2% Lat: _____ Long: _____ Datum: _____
Soil Map Unit Name: Ogden muck (Oc) NWI classification: None
Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** ☒ No ☐ (If no, explain in Remarks)
Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? **Yes** ☒ No ☐
Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ **Yes**	☐ No	**Is the Sampled Area within a Wetland?**	☒ **Yes** ☐ No
Hydric Soils Present?	☒ **Yes**	☐ No		
Wetland Hydrology Present?	☒ **Yes**	☐ No		

Remarks: 90-day antecedent precipitation is normal.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. **Fraxinus pennsylvanica**	**10**	☒	**FACW**
2. **Rhamnus cathartica**	**5**	☒	**FAC**
3. _____	_____	☐	_____
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	15	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)			
1. **Rhamnus cathartica**	**70**	☒	**FAC**
2. Fraxinus pennsylvanica	5	☐	FACW
3. Populus alba	5	☐	NI (UPL)
4. _____	_____	☐	_____
5. _____	_____	☐	_____
	80	= Total Cover	

Herb Stratum (Plot size: 5' radius)			
1. **Rhamnus cathartica**	**25**	☒	**FAC**
2. **Frangula alnus**	**15**	☒	**FACW**
3. Carex granularis	5	☐	FACW
4. Viburnum opulus	5	☐	FAC
5. Vitis riparia	3	☐	FACW
6. _____	_____	☐	_____
7. _____	_____	☐	_____
8. _____	_____	☐	_____
9. _____	_____	☐	_____
10. _____	_____	☐	_____
	53	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	☐	_____
2. _____	_____	☐	_____
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ **2 - Dominance Test is >50%**
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ 5 - Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.) Shrub-carr (buckthorn thicket).

SOIL

Sampling Point: 62

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	N 2.5/	90	10YR 4/6	10	C	PL M	Silt loam	
4-8	N 2.5/	95	10YR 4/6	5	C	PL M	Silt loam	with gravel
8-17	10YR 5/2	95	10YR 4/6	5	C	PL M	Loamy fine sand	
17-26	N 2.5/	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains

[2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ **Depleted Below Dark Surface (A11)**
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ **Redox Dark Surface (F6)**
- ☐ Depleted Dark Surface (F7)
- ☒ **Redox Depressions (F8)**

Indicators for Problematic Hydric Soils[3]:

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of Hydrophytic vegetation and Wetland hydrology must be present, Unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☒ **Saturation (A3)**
- ☐ Water marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ **Water-Stained Leaves (B9)**
- ☐ Aquatic Fauna (B13)
- ☐ True Aquatic Plants (B14)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Gauge or Well Data (D9)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☒ **Dry-Season Water Table (C2)**
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ **Geomorphic Position (D2)**
- ☒ **FAC-Neutral Test (D5)**

Field Observations:

Surface Water Present? Yes ☐ **No** ☒ Depth (inches): _____

Water Table Present? **Yes** ☒ No ☐ Depth (inches): 14

Saturation Present? (includes capillary fringe) **Yes** ☒ No ☐ Depth (inches): 0 (at surface)

Wetland Hydrology Present? **Yes** ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Maps (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial photos (Exhibit 4).

Remarks: The sample site is in a depression that lies just outside the FEMA-mapped one-percent-annual-probability floodplain of Big Muskego Lake. The site is at lower elevation than the directly adjacent portion of the mapped floodplain (e.g. sample site 61).

Exhibit 10. Site Photos

Lynn Kurer and Wayne Bushberger Properties
NW Quarter, Section 13,
NE Quarter, Section 14, T5N-R20E
City of Muskego, Waukesha County

Photo 1. Wetland sample site 1, PCA 1. (NW view)
Atypical (farmed) wetland/fresh (wet) meadow.

Photo 2. Upland sample site 2. Agricultural field.
Sample sites 12 and 15 are similar.

Photo 3. Wetland sample site 3, PCA 1.
Atypical (farmed) wetland.

Photo 4. Upland sample site 4. Agricultural field.

Photo 5. Wetland sample site 5, PCA 1. (West view)
Atypical (farmed) wetland/fresh (wet) meadow.

Photo 6. Upland sample site 6. Old field/agricultural field.
Sample sites 22, 24, 26, and 29 are similar.

Photo 7. Wetland sample site 7, PCA 1. (South view)
Atypical (farmed) wetland/fresh (wet) meadow.

Photo 8. Wetland sample site 8. (East view)
Atypical (farmed) wetland/fresh (wet) meadow.

Photo 9. Upland sample site 9. (East view)
Agricultural field. Sample site 10 (West view) is similar.

Photo 10. Wetland sample site 11, PCA 1. (North view)
Atypical (farmed) wetland/fresh (wet) meadow.

Photo 11. Upland sample site 13.
Hardwoods.

Photo 12. Wetland sample site 14, PCA 2.
Hardwood swamp.

Photo 13. Wetland sample site 16, PCA 1. (South view)
Atypical (farmed) wetland.

Photo 14. Wetland sample site 17, PCA 1. (SE view)
Atypical (farmed) wetland/fresh (wet) meadow.

Photo 15. Upland sample site 18. (East view)
Agricultural field. Sample site 31 is similar.

Photo 16. Wetland sample site 19, PCA 1. (SW view)
Atypical (farmed) wetland/fresh (wet) meadow.

Photo 17. Wetland hydrology indicator C8, crayfish burrow, at sample site 19.

Photo 18. Wetland hydrology indicator B5, iron deposit, at sample site 19.

Photo 19. Upland sample site 20. Old field, occasionally farmed.

Photo 20. Wetland sample site 21, PCA 1. NE view)) Atypical (farmed) wetland/fresh (wet) meadow.

Photo 21. Wetland sample site 23, PCA 1. (South view) Atypical (farmed) wetland/fresh (wet) meadow. Sample sites 30 and 32 are similar.

Photo 22. Wetland sample site 25, PCA 1. Atypical (farmed) wetland/fresh (wet) meadow.

Photo 23. Wetland sample site 27, PCA 1. (SSE view) Atypical (farmed) wetland/fresh (wet) meadow. Sample site 28 is similar.

Photo 24. Wetland hydrology indicator B4, algal crust or mat at sample site 30.

Photo 25. Upland sample site 33. (South view)
Agricultural field. Sample sites 34 and 42 are similar.

Photo 26. Wetland sample site 35, PCA 2.
Fresh (wet) meadow.

Photo 27. Wetland sample site 36, PCA 1. (West view)
Atypical (farmed) wetland.

Photo 28. Upland sample site 37. (West view)
Agricultural field. Sample sites 38, 40, and 44 are similar.

Photo 29. Wetland sample site 39, PCA 1.
Atypical (farmed) wetland. Sample site 41 is similar.

Photo 30. Wetland hydrology indicator, B5, iron deposit near sample site 39.

Photo 31. Wetland sample site 43, PCA 1. (North view) Atypical (farmed) wetland.

Photo 32. Upland sample site 45. Buckthorn thicket and hardwoods.

Photo 33. Wetland sample site 46, PCA 4. Shrub-carr (buckthorn thicket) at the edge of fresh (wet) meadow.

Photo 34. Upland sample site 47. Buckthorn thicket.

Photo 35. Wetland sample site 48, PCA 4. Shrub-carr (buckthorn thicket).

Photo 36. Morphological adaptations, buckthorn with shallow roots and multiple stems, at sample site 48.

Photo 37. Wetland sample site 49, PCA 3. (NW view)
Atypical (mowed) wetland in a roadside swale.

Photo 38. Upland sample site 50.
Mowed lawn.

Photo 39. Upland sample site 51.
Buckthorn thicket.

Photo 40. Wetland sample site 52, PCA 4. Fresh (wet) meadow and shrub-carr with lowland hardwoods.

Photo 41. Wetland sample site 53, PCA 4.
Atypical (mowed) wetland.

Photo 42. Upland sample site 54.
Edge of mowed lawn and gravel driveway.

Photo 43. Wetland sample site 55, PCA 4.
Shrub-carr (buckthorn thicket). Sample site 58 is similar.

Photo 44. Upland sample site 56. Buckthorn thicket.
Sample site 61 is similar.

Photo 45. Upland sample site 57.
Buckthorn thicket with hardwoods.

Photo 46. Wetland sample site 59, PCA 4.
Shallow marsh and open water of a dredged channel.

Photo 47. Upland sample site 60.
Thicket.

Photo 48. Wetland sample site 62, PCA 4.
Shrub-carr (buckthorn thicket).

Photo 49. South view, staked portion of wetland PCA 1, including sample site 1.

Photo 50. West view, staked portion of wetland PCA 1, including sample site 3.

Photo 51. West view, staked portion of wetland PCA 1, including sample site 5.

Photo 52. North view, staked portion of wetland PCA 1, drainageway/swale including sample sites 7 and 8.

Photo 53. NW view, partially staked portion of wetland PCA 1, including sample site 11.

Photo 54. Collapsed drain tile just north of sample site 15.

Photo 55. SE view of the portion of wetland PCA 1, including sample site 17. Only the left side of this connecting drainageway is staked.

Photo 56. ESE view along staked wetland boundary near sample site 19 (PCA 1), with a portion of wetland PCA 2 in the upper right of the image.

Photo 57. WNW view, staked portion of wetland PCA 1, from near sample site 21.

Photo 58. West view, staked portion of wetland PCA 1, near sample site 23.

Photo 59. East view along PCA 1 wetland boundary near sample site 23. PCA 2, hardwood swamp and shrub-carr including sample site 14, is in the background.

Photo 60. SE view near sample site s28 (PCA 1) and 29. Flags in the photo are on the northeast side of a drainageway/swale connection between larger wetland areas that each extend to Durham Drive.

Photo 61. SW view from wetland sample site 30 (PCA 1) with a view of the portion of PCA 2 that includes sample site 35 in the background.

Photo 62. East view along staked wetland boundary from sample site 33.

Photo 63. North view along staked PCA 2 wetland boundary near sample sites 34 and 35.

Photo 64. North view, staked PCA 1 wetland boundary between sample sites 36 and 37.

Photo 65. North view along staked PCA 1 wetland boundary from between sample sites 39 and 40.

Photo 66. Culvert underneath Durham Drive near sample site 41 (PCA 1).

Photo 67. West view, staked PCA 1 wetland boundary between sample sites 43 and 44.

Photo 68. SE view, three small staked wetlands in a mowed swale comprising PCA 3.

Photo 69. NW view, staked PCA 4 wetland boundary along the edge of old fill material near sample site 53.

Photo 70. Culvert crossing underneath Durham Drive near sample site 53.

Photo 71. East view, dredged pond portion of PCA 4, SE of sample sites 57 and 58.

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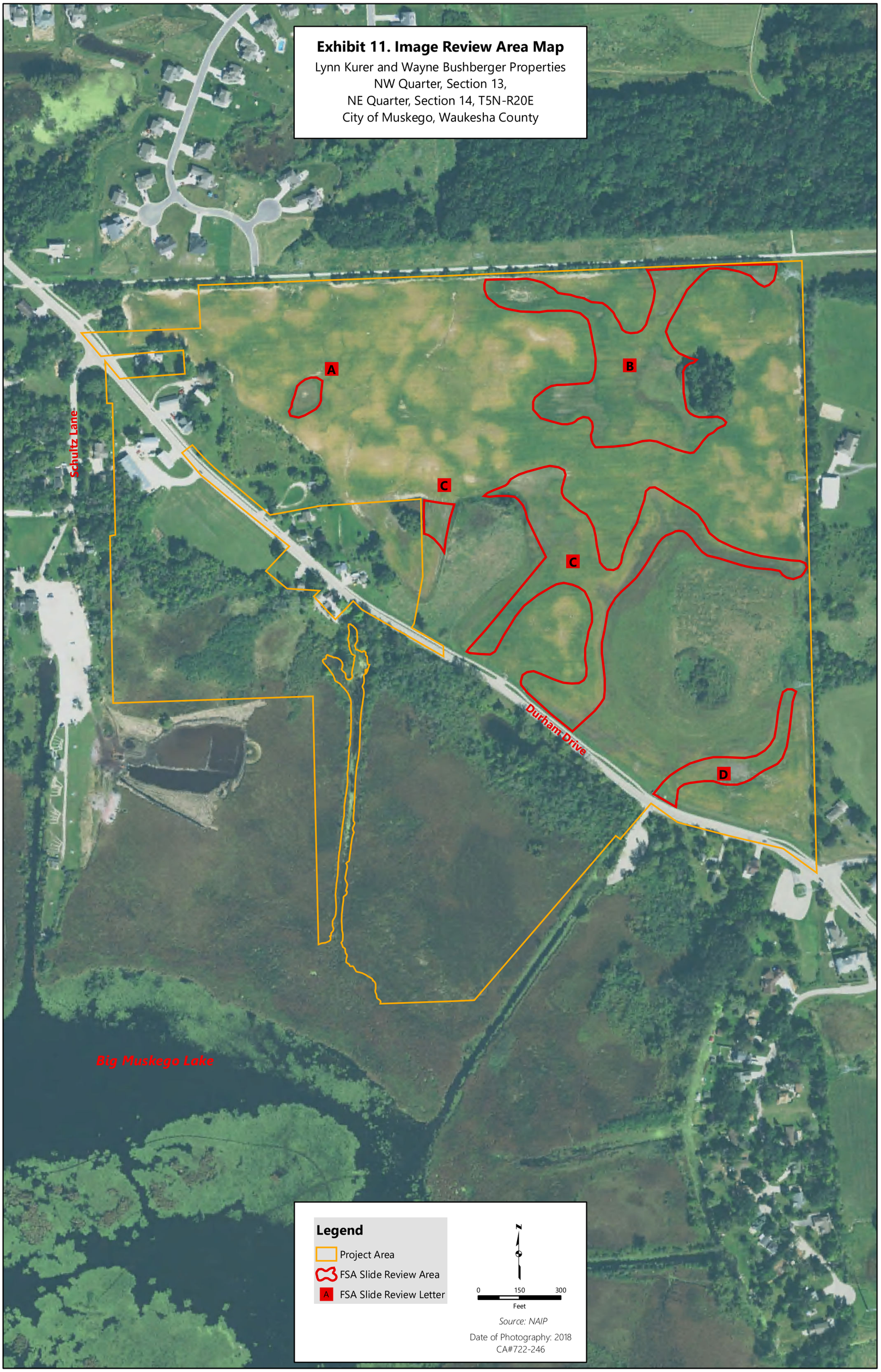
Exhibit 11. Image Review Area Map
Lynn Kurer and Wayne Bushberger Properties
NW Quarter, Section 13,
NE Quarter, Section 14, T5N-R20E
City of Muskego, Waukesha County
A
B
C
C
D
Schultz Lane
Durham Drive
Big Muskego Lake
Legend
Project Area
FSA Slide Review Area
A FSA Slide Review Letter
N
0 150 300
Feet
Source: NAIP
Date of Photography: 2018
CA#722-246

Exhibit 12. Wetland Hydrology from Aerial Imagery – Recording Form[a]

Project Name: Kurer and Bushberger Properties Date: 7-29-2019 County: Waukesha

Investigators: Chris Jors and Zofia Noe; SEWRPC Legal Description (T, R, S): T5N, R20E, S13 and S14

Summary Table

Date Image Taken (M-D-Y)	Image Source	Climate Condition (wet=3 normal=2 dry=1)[b]	Image Interpretation for Area(s)				
				A	B	C	D
			Sample site(s):	1	5, 7, 8, 11, 16, 17, 21, 23	19, 25, 27, 28, 30, 32, 37, 40	41 and 43
			Soil Unit(s):	OzaB, OzaB2	AsA	Oc, Ph	HtA, AsA
			NRCS Inventory:	W	PC, W	PC	PC, FW
			Landform:	Depression	Swale	Hill slope	Hill slope
9-15-2018	NAIP	3		WS, SW	WS	WS, SS	WS
9-23-2017	NAIP	1		WS, SS	WS	WS	WS
9-22-2015	**NAIP**	**2**		**SS, SW**	**WS**	**NV**	**NV**
6-19-2013	NAIP	3		NSS	SS	SS-	SS-
6-28-2010	NAIP	3		SW	SS, SW	WS	WS
7-5-2008	NAIP	3		SS+	SS	SS-	NSS
6-12-2006	NAIP	3		SW	SS-	SS-	SS-
6-16-2005	NAIP	1		SW	SS-	SS-	WS, SS
Aug. 2004	**FSA**	**2**		**SW, DO, NC**	**NV**	**NV**	**NV**
June 2003	**FSA**	**2**		**NSS**	**SS**	**SS**	**SS+**
2002	**FSA**	**2**		**NSS**	**SS**	**SS-**	**WS, SS**
June 2001	FSA	3		SW-	SS-	SS-	SS-
June 2000	**FSA**	**2**		**SW**	**SS+**	**SS**	**SS-**
June 1999	FSA	3		SW	SS-	SS-	SS+
June 1998	**FSA**	**2**		**NSS**	**SS-**	**SS-**	**SS+**
June 1997	FSA	3		NSS	SS	SS-	SS+
Aug. 1996	**FSA**	**2**		**DO**	**CS**	**NV**	**CS**
June 1995	FSA	1		NSS	SS-	SS-	SS
1994	FSA	1		CS	NV	NV	NV
1993	**FSA**	**2**		**SW, NC**	**NV**	**WS**	**WS**
Aug. 1992	FSA	1		NSS, NV	WS	WS	WS
Aug. 1991	FSA	1		NNS	SS	SS	WS, SS
Normal Climate Condition Years:				**8**	**8**	**8**	**8**
Number and % with wet signatures:				**5 (63%)**	**6 (75%)**	**5 (63%)**	**6 (75%)**
All Climate Condition Years:				22	22	22	22
Number and % with wet signatures:				14 (64%)	19 (86%)	18 (82%)	18 (82%)

KEY		
WS – wetland signature	SS – soil wetness signature	CS – crop stress
NC – not cropped	AP – altered pattern	NV – normal vegetative cover
DO – drowned out	SW – standing water	NSS – no soil wetness signature
Other labels or comments: "+" and "-" symbols indicate strong and weak signatures, respectively		

Note: Where the date of an FSA slide is unknown, June 30 is assumed. Where only the month is known, the end of June, early July, and early August is assumed.

[a] This Form derived from US Army Corps of Engineers St. Paul District and Minnesota Board of Water and Soil Resources, *Guidance for Offsite Hydrology/Wetland Determinations*, 2016.

[b] Climate data are taken from the nearest WETS station(s) with complete data: WAUKESHA

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Exhibit 13. NAIP/FSA Images with Normal Antecedent Precipitation

Lynn Kurer and Wayne Bushberger Properties
NW Quarter, Section 13 and NW Quarter, Section 14, T5N-R20E
City of Muskego, Waukesha County

Photo 1. September 22, 2015 - NAIP

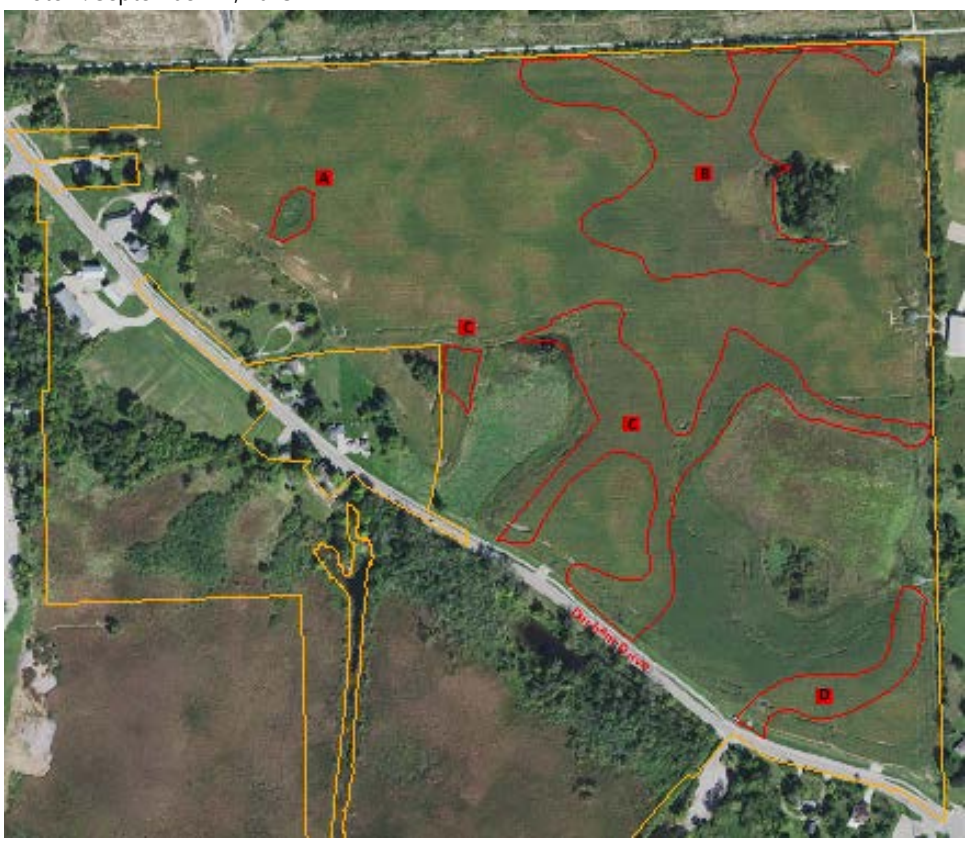

Photo 2. August 2004 – FSA

Photo 3. June 2003 – FSA

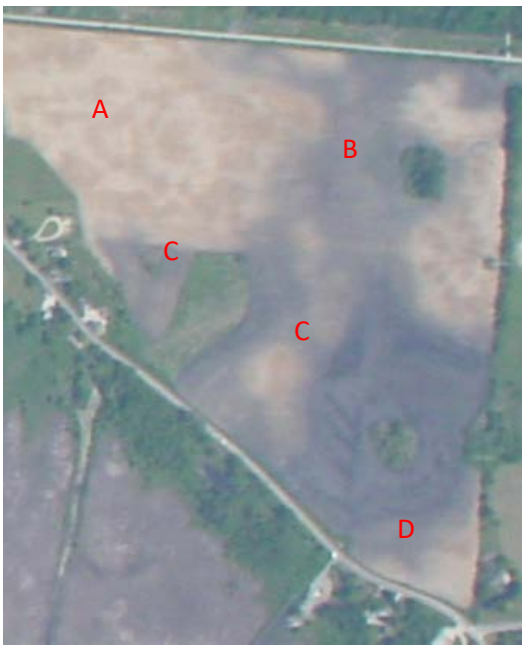

Photo 4. 2002 – NAIP

Photo 5. June 2000 – FSA

Photo 6. June 1998 – FSA

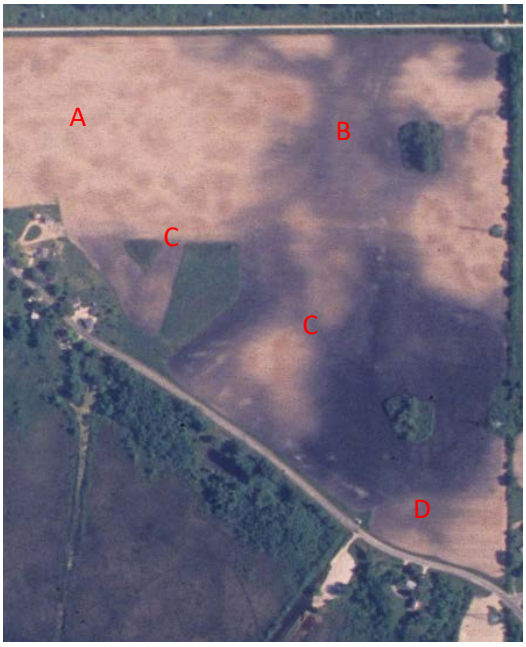

Photo 7. August 1996 – FSA

Photo 8. 1993 – FSA

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