












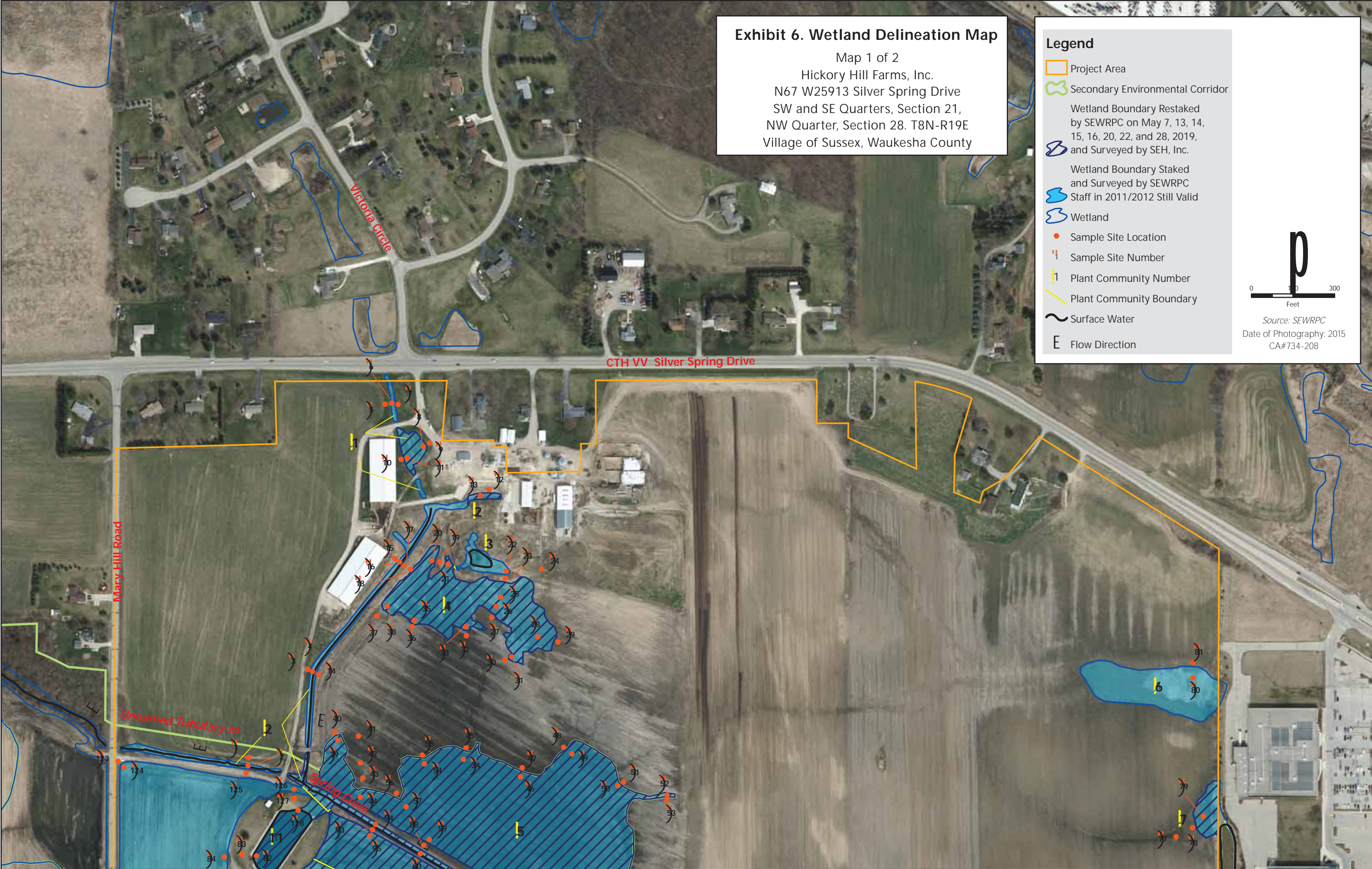
Exhibit 6. Wetland Delineation Map
 Map 1 of 2
 Hickory Hill Farms, Inc.
 N67 W25913 Silver Spring Drive
 SW and SE Quarters, Section 21,
 NW Quarter, Section 28. T8N-R19E
 Village of Sussex, Waukesha County

Legend

-  Project Area
-  Secondary Environmental Corridor
-  Wetland Boundary Restaked by SEWRPC on May 7, 13, 14, 15, 16, 20, 22, and 28, 2019, and Surveyed by SEH, Inc.
-  Wetland Boundary Staked and Surveyed by SEWRPC Staff in 2011/2012 Still Valid
-  Wetland
-  Sample Site Location
-  Sample Site Number
-  Plant Community Number
-  Plant Community Boundary
-  Surface Water
-  Flow Direction

0 100 300
 Feet

Source: SEWRPC
 Date of Photography: 2015
 CA#734-208



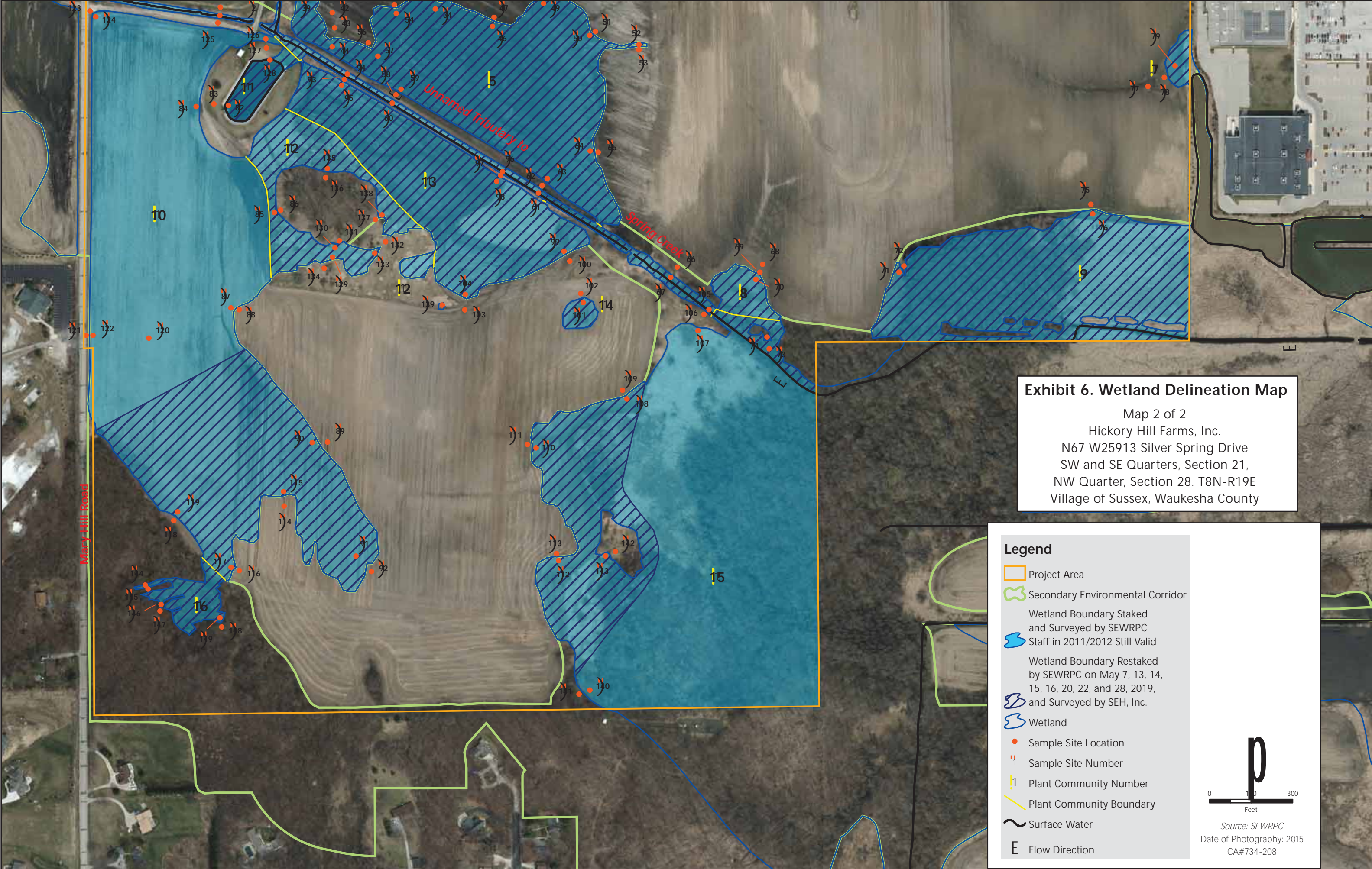


Exhibit 6. Wetland Delineation Map
 Map 2 of 2
 Hickory Hill Farms, Inc.
 N67 W25913 Silver Spring Drive
 SW and SE Quarters, Section 21,
 NW Quarter, Section 28. T8N-R19E
 Village of Sussex, Waukesha County

Legend

- Project Area
- Secondary Environmental Corridor
- Wetland Boundary Staked and Surveyed by SEWRPC Staff in 2011/2012 Still Valid
- Wetland Boundary Restaked by SEWRPC on May 7, 13, 14, 15, 16, 20, 22, and 28, 2019, and Surveyed by SEH, Inc.
- Wetland
- Sample Site Location
- Sample Site Number
- Plant Community Number
- Plant Community Boundary
- Surface Water
- Flow Direction

0 100 300
 Feet

Source: SEWRPC
 Date of Photography: 2019
 CA#734-208

Exhibit 7. Preliminary Vegetation Survey

Hickory Hill Farms, Inc.
N67 W25913 Silver Spring Drive

Dates: May 7, 13, 14, 15, 16, 20, 22, and 28, 2019
December 8, 13, 14, and 15, 2011

Observers: Christopher J. Jors, Senior Biologist (2019 and 2011)
Daniel L. Carter, Ph.D., Principal Biologist (2019)
Jennifer L. Dietl, Senior Biologist (2019 and 2011)
Shane T. Heyel, Biologist (2019)
Zofia Noe, Biologist (2019)
Donald M. Reed, Ph.D., Retired Chief Biologist (2011)
Lawrence A. Leitner, Retired Principal Biologist (2011)
Southeastern Wisconsin Regional Planning Commission

Location: Village of Sussex in parts of the South one-half and Northwest one-quarter of U.S. Public Land Survey Sections 21 and 28, respectively, Township 8 North, Range 19 East, Waukesha County, Wisconsin.

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

Co-dominant species

Alisma triviale--Large-flowered water plantain
Amaranthus retroflexus--Redroot pigweed
Cerastium arvense--Mouse-eared chickweed
Packera aurea--Golden ragwort
Ranunculus sceleratus--Cursed crowfoot

NON-Native Species

Agrostis gigantea--Redtop grass
Capsella bursa-pastoris--Shepherd's purse
Elymus repens--Quack grass
Glechoma hederacea--Creeping Charlie
Malva neglecta--Cheeses
Plantago major--Common plantain
Poa pratensis--Kentucky bluegrass
Rumex crispus--Curly dock
Taraxacum officinale--Common dandelion

Total number of plant species: 14

Number of alien, or non-native, plant species: 9 (64 percent)

PCA 1 cont.

This approximately 0.32-acre plant community area consists of a drainage swale with atypical (mowed) wetland and degraded fresh (wet) meadow. Disturbances to the plant community area include regular mowing, past filling for driveway access, siltation and sedimentation due to stormwater runoff from adjacent lands, and water level changes due to ditching and draining. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 2 – Native Species

Acer negundo--Boxelder
Amaranthus retroflexus--Redroot pigweed
Ambrosia trifida--Giant ragweed
Angelica atropurpurea--Angelica
Cornus alba--Red-osier dogwood
Cornus obliqua--Silky dogwood
Echinocystis lobata--Wild cucumber
Erigeron canadensis--Horseweed
Galium aparine--Annual bedstraw
Impatiens capensis--Jewelweed
Lemna minor--Lesser duckweed
Persicaria lapathifolia--Heart's-ease
Ranunculus sceleratus--Cursed crowfoot
Sambucus nigra--Elderberry
Solidago altissima--Tall goldenrod
Urtica dioica--Stinging nettle

NON-Native Species

Alliaria petiolata--Garlic mustard
Arctium minus--Common burdock
Barbarea vulgaris--Yellow rocket
Glyceria maxima--Tall manna grass
Phalaris arundinacea--Reed canary grass
Poa annua--Annual bluegrass
Rhamnus cathartica--Common buckthorn
Rumex crispus--Curly dock
Solanum dulcamara--Deadly nightshade
Taraxacum officinale--Common dandelion
Typha angustifolia--Narrow-leaved cat-tail

Total number of plant species: 27

Number of alien, or non-native, plant species: 11 (41 percent)

This approximately 2.1-acre plant community area is part of a larger wetland complex associated with an unnamed tributary to Spring Creek and consists of open water and fresh (wet) meadow (mostly degraded), . Disturbances to the plant community area include barnyard runoff; dumping; past filling for driveway crossings; siltation and sedimentation due to stormwater runoff from adjacent lands; water level changes due to ditching, draining, and stream channel realignment; side casting of dredge spoil material; and agricultural land management activities such as plowing along the wetland edge. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 3 – Native Species

Acer negundo--Boxelder
Ambrosia trifida--Giant ragweed
Cornus alba--Red-osier dogwood
Lemna minor--Lesser duckweed
Populus deltoides--Cottonwood
Salix nigra--Black willow

NON-Native Species

Alliaria petiolata--Garlic mustard
Arctium minus--Common burdock
Leonurus cardiaca--Motherwort
Phalaris arundinacea--Reed canary grass
Rhamnus cathartica--Common buckthorn
Rumex crispus--Curly dock
Setaria faberi--Giant foxtail
Solanum dulcamara--Deadly nightshade

Total number of plant species: 14

Number of alien, or non-native, plant species: 8 (57 percent)

This approximately 0.26-acre wetland plant community area consists of an excavated pond with open water, degraded fresh (wet) meadow, and scattered lowland hardwoods. Disturbances to the plant community area include dumping, selective cutting of trees, pond excavation, side casting of dredge spoil material, and siltation and sedimentation due to stormwater runoff from adjacent lands. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 4 – Native Species

Ambrosia trifida--Giant ragweed
Ranunculus sceleratus--Cursed crowfoot
Vitis riparia--Riverbank grape

NON-Native Species

Datura stramonium--Jimson-weed
Phalaris arundinacea--Reed canary grass

Total number of plant species: 5

Number of alien, or non-native, plant species: 2 (40 percent)

This approximately 2.6-acre wetland plant community area consists of atypical (farmed) wetland and small stands of degraded fresh (wet) meadow on a hillside seepage area. Disturbances to the plant community area include ruts from farm machinery, siltation and sedimentation due to stormwater runoff from adjacent lands, water level changes due to recent drain tile upgrades, agricultural land management activities such as cultivation, and filling with dredge spoils during excavation of the nearby pond. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 5 – Native Species

Amaranthus retroflexus--Redroot pigweed
Ambrosia artemisiifolia--Common ragweed
Ambrosia trifida--Giant ragweed
Panicum dichotomiflorum--Knee grass
Ranunculus sceleratus--Cursed crowfoot
Urtica dioica--Stinging nettle
Veronica peregrina--Purslane speedwell

NON-Native Species

Cirsium arvense--Canada thistle
Phalaris arundinacea--Reed canary grass
Zea mays--Domestic corn (planted and harvested)

Total number of plant species: 10

Number of alien, or non-native, plant species: 3 (30 percent)

This approximately 10.4-acre plant community area is part of a larger floodplain-wetland complex associated with an unnamed tributary to Spring Creek and consists of atypical (farmed) wetland. Disturbances to the plant community area include side casting of dredge spoil material, siltation and sedimentation due to stormwater runoff from adjacent lands, water level changes due to recent drain tile upgrades, agricultural land management activities such as cultivation, and ruts from farm machinery. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 6 – Native Species

Ambrosia trifida--Giant ragweed
Cornus alba--Red-osier dogwood
Panicum dichotomiflorum--Knee grass
Persicaria pensylvanica--Pinkweed
Ranunculus sceleratus--Cursed crowfoot
Salix interior--Sandbar willow
Salix nigra--Black willow
Solidago altissima--Tall goldenrod
Symphotrichum lanceolatum--Marsh aster
Symphotrichum puniceum--Red-stemmed aster
Typha latifolia--Broad-leaved cat-tail

NON-Native Species

Cirsium arvense--Canada thistle
Daucus carota--Queen Anne's lace
Phalaris arundinacea--Reed canary grass
Poa pratensis--Kentucky bluegrass
Polygonum aviculare--Prostrate knotweed
Rumex crispus--Curly dock
Setaria faberi--Giant foxtail
Typha angustifolia--Narrow-leaved cat-tail
Zea mays--Domestic corn (planted and harvested)

PCA 6 cont.

Total number of plant species: 20

Number of alien, or non-native, plant species: 9 (45 percent)

This approximately 1.6-acre wetland plant community area consists of atypical (farmed) wetland and small stands of fresh (wet) meadow and shrub-carr (willow thicket). Disturbances to the plant community area include water level changes due to recent drain tile upgrades, filling along the wetland edge, siltation and sedimentation due to stormwater runoff from adjacent lands, agricultural land management activities such as cultivation, and tire ruts from farm machinery. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 7 – Native Species

Acer negundo--Boxelder
Ambrosia trifida--Giant ragweed
Euthamia graminifolia--Grass-leaved goldenrod
Persicaria pensylvanica--Pinkweed
Salix interior--Sandbar willow
Symphotrichum lanceolatum--Marsh aster
Vitis riparia--Riverbank grape

NON-Native Species

Cirsium arvense--Canada thistle
Phalaris arundinacea--Reed canary grass
Rumex crispus--Curly dock
Setaria faberj--Giant foxtail
Setaria pumila--Yellow foxtail
Setaria sp.--Foxtail
Zea mays--Domestic corn (planted and harvested)

Total number of plant species: 14

Number of alien, or non-native, plant species: 7 (50 percent)

This approximately 0.31-acre plant community area consists of atypical (farmed) wetland and degraded fresh (wet) meadow. Disturbances to the plant community area include water level changes due to recent drain tile upgrades, filling along the wetland edge, siltation and sedimentation due to stormwater runoff from adjacent lands, agricultural land management activities such as cultivation, and tire ruts from farm machinery. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 8 – Native Species

Acer negundo--Boxelder
Amaranthus retroflexus--Redroot pigweed
Ambrosia trifida--Giant ragweed
Angelica atropurpurea--Angelica
Asclepias incarnata--Marsh milkweed
Carex pellita--Woolly sedge
Cyperus esculentus--Chufa
Panicum dichotomiflorum--Knee grass

PCA 8 cont.

Native Species

Persicaria lapathifolia--Heart's-ease
Persicaria pennsylvanica--Pinkweed
Ranunculus sceleratus--Cursed crowfoot
Salix interior--Sandbar willow
Solidago altissima--Tall goldenrod
Typha latifolia--Broad-leaved cat-tail
Verbena hastata--Blue vervain

NON-Native Species

Abutilon theophrasti--Velvet-leaf
Barbarea vulgaris--Yellow rocket
Cirsium arvense--Canada thistle
Phalaris arundinacea--Reed canary grass
Setaria faberi--Giant foxtail
Setaria pumila--Yellow foxtail
Setaria sp.--Foxtail
Zea mays--Domestic corn (planted and harvested)

Total number of plant species: 23

Number of alien, or non-native, plant species: 8 (35 percent)

This approximately 0.70-acre plant community area is part of a larger floodplain-wetland complex associated with an unnamed tributary to Spring Creek and consists of atypical (farmed) wetland. Disturbances to the plant community area include side casting of dredge spoil material, siltation and sedimentation due to stormwater runoff from adjacent lands, water level changes due to nearby stream channel realignment and recent drain tile upgrades, agricultural land management activities such as cultivation, and tire ruts from farm machinery. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 9 – Native Species

Acer negundo--Boxelder
Carex blanda--Wood sedge
Circaea canadensis--Enchanter's nightshade
Fraxinus pennsylvanica--Green ash
Geum canadense--White avens
Glyceria striata--Fowl manna grass
Impatiens capensis--Jewelweed
Ranunculus hispidus--Bristly buttercup
Sanicula odorata--Clustered black snakeroot
Symphotrichum lateriflorum--Calico aster
Urtica dioica--Stinging nettle
Verbena hastata--Blue vervain
Veronica peregrina--Purslane speedwell
Vitis riparia--Riverbank grape

NON-Native Species

Alliaria petiolata--Garlic mustard
Phalaris arundinacea--Reed canary grass
Poa annua--Annual bluegrass

PCA 9 cont.

Total number of plant species: 17

Number of alien, or non-native, plant species: 3 (18 percent)

This approximately 9.6-acre plant community area is part of a larger floodplain-wetland complex associated with an unnamed tributary to Spring Creek and consists of hardwood swamp, degraded fresh (wet) meadow, atypical (farmed) wetland, and open water. Disturbances to the plant community area include agricultural land management activities such as cultivation, siltation and sedimentation due to stormwater runoff from adjacent lands, water level changes due to stream channel realignment and recent drain tile upgrades discharging into the subject wetland, and side casting of dredge spoil material. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 10 – Native Species

Acer negundo--Boxelder
Alisma triviale--Large-flowered water plantain
Amaranthus retroflexus--Redroot pigweed
Ambrosia artemisiifolia--Common ragweed
Carex pellita--Woolly sedge
Chenopodium album--Lamb's quarters
Cyperus esculentus--Chufa
Panicum capillare--Witch grass
Panicum dichotomiflorum--Knee grass
Ranunculus sceleratus--Cursed crowfoot
Salix discolor--Pussy willow
Scirpus atrovirens--Green bulrush
Urtica dioica--Stinging nettle
Veronica peregrina--Purslane speedwell

NON-Native Species

Abutilon theophrasti--Velvet-leaf
Agrostis gigantea--Redtop grass
Barbarea vulgaris--Yellow rocket
Cirsium arvense--Canada thistle
Dactylis glomerata--Orchard grass
Malva neglecta--Cheeses
Medicago lupulina--Black medick
Phalaris arundinacea--Reed canary grass
Phragmites australis subsp. *australis*--Tall reed grass
Plantago major--Common plantain
Poa annua--Annual bluegrass
Poa pratensis--Kentucky bluegrass
Setaria faberj--Giant foxtail
Taraxacum officinale--Common dandelion
Trifolium pratense--Red clover
Trifolium repens--White clover
Triticum aestivum--Wheat
Typha angustifolia--Narrow-leaved cat-tail
Zea mays--Domestic corn (planted and harvested)

PCA 10 cont.

Total number of plant species: 33

Number of alien, or non-native, plant species: 19 (58 percent)

This approximately 26.5-acre plant community area is part of a larger floodplain-wetland complex associated with an unnamed tributary to Spring Creek and consists of atypical (farmed) wetland, and atypical (mowed) wetland and fresh (wet) meadow along the edge. Disturbances to the plant community area include agricultural land management activities such as cultivation, tire ruts from farm machinery, regular mowing, side casting of dredge spoil materials from adjacent pond excavation, past filling for a farm access driveway, siltation and sedimentation due to stormwater runoff from adjacent lands, and water level changes due to stream channel re-alignment and recent drain tile upgrades. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 11- Native Species

Alisma triviale--Large-flowered water plantain

Amaranthus retroflexus--Redroot pigweed

Equisetum arvense--Common horsetail

Panicum capillare--Witch grass

Panicum dichotomiflorum--Knee grass

NON-Native Species

Digitaria sp.--Crab grass

Total number of plant species: 6

Number of alien, or non-native, plant species: 1 (17 percent)

This approximately 0.66-acre plant community area consists of a constructed open water pond and atypical (mowed) wetland. Disturbances to the plant community area include pond construction, side casting of dredge spoil materials, placement of rock rip-rap along the shoreline, and regular mowing on the north side of the pond at the outlet. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 12 – Native Species

Amaranthus retroflexus--Redroot pigweed

Ambrosia artemisiifolia--Common ragweed

Ambrosia trifida--Giant ragweed

Bidens trichosperma--Tall swamp-marigold

Carex pellita--Woolly sedge

Carex stricta--Tussock sedge

Carex vulpinoidea--Fox sedge

Cornus alba--Red-osier dogwood

Cyperus esculentus--Chufa

Epilobium coloratum--Willow-herb

Equisetum arvense--Common horsetail

Euthamia graminifolia--Grass-leaved goldenrod

Geum aleppicum--Yellow avens

Geum canadense--White avens

PCA 12 cont.

Native species

Impatiens capensis--Jewelweed
Lilium michiganense--Michigan lily
Panicum dichotomiflorum--Knee grass
Persicaria lapathifolia--Heart's-ease
Persicaria pennsylvanica--Pinkweed
Salix discolor--Pussy willow
***Salix interior*--Sandbar willow**
Sambucus nigra--Elderberry
Solidago altissima--Tall goldenrod
Solidago gigantea--Giant goldenrod
Symphotrichum lanceolatum--Marsh aster
Symphotrichum puniceum--Red-stemmed aster
Typha latifolia--Broad-leaved cat-tail
Urtica dioica--Stinging nettle
Verbena hastata--Blue vervain
Verbena urticifolia--White vervain
Vitis riparia--Riverbank grape

NON-Native Species

Agrostis gigantea--Redtop grass
Alliaria petiolata--Garlic mustard
Cirsium arvense--Canada thistle
Daucus carota--Queen Anne's lace
Elymus repens--Quack grass
***Phalaris arundinacea*--Reed canary grass**
Poa pratensis--Kentucky bluegrass
Rhamnus cathartica--Common buckthorn
Rosa multiflora--Multiflora rose
Setaria pumila--Yellow foxtail
Setaria sp.--Foxtail
Solanum dulcamara--Deadly nightshade
Sonchus arvensis--Field sow thistle
Taraxacum officinale--Common dandelion
Typha angustifolia--Narrow-leaved cat-tail
Zea mays--Domestic corn

Total number of plant species: 47

Number of alien, or non-native, plant species: 16 (34 percent)

This approximately 1.19-acre plant community area is part of a larger wetland complex and consists of fresh (wet) meadow (partly degraded), shrub-carr (willow thicket), and degraded sedge meadow. Disturbances to the plant community area include the establishment of a farm access road, side casting of dredge spoil materials from adjacent pond construction, siltation and sedimentation due to stormwater runoff from adjacent lands, and agricultural land management activities including past grazing. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 13 – Native Species

Acer negundo--Boxelder
Amaranthus retroflexus--Redroot pigweed
Ambrosia artemisiifolia--Common ragweed
Ambrosia trifida--Giant ragweed
Angelica atropurpurea--Angelica
Carex stricta--Tussock sedge
Chenopodium album--Lamb's quarters
Epilobium coloratum--Willow-herb
Erigeron canadensis--Horseweed
Euthamia graminifolia--Grass-leaved goldenrod
Helenium autumnale--Sneezeweed
Impatiens capensis--Jewelweed
Oenothera biennis--Evening-primrose
Panicum dichotomiflorum--Knee grass
Persicaria pensylvanica--Pinkweed
Ranunculus sceleratus--Cursed crowfoot
Rorippa palustris--Rough marsh cress
Schoenoplectus tabernaemontani--Soft-stemmed bulrush
Scirpus cyperinus--Woolgrass
Solidago altissima--Tall goldenrod
Symphotrichum lanceolatum--Marsh aster
Ulmus americana--American elm
Verbena hastata--Blue vervain
Veronica peregrina--Purslane speedwell

NON-Native Species

Abutilon theophrasti--Velvet-leaf
Phalaris arundinacea--Reed canary grass
Poa pratensis--Kentucky bluegrass
Rumex crispus--Curly dock
Setaria faberi--Giant foxtail
Setaria sp.--Foxtail
Zea mays--Domestic corn

Total number of plant species: 31

Number of alien, or non-native, plant species: 7 (23 percent)

This approximately 7.4-acre plant community area is part of a larger floodplain-wetland complex associated with an unnamed tributary to Spring Creek and consists of atypical (farmed) wetland and fresh (wet) meadow. Disturbances to the plant community area include side casting of dredge spoil materials from adjacent creek channel re-alignment, siltation and sedimentation due to stormwater runoff from adjacent lands, water level changes due to stream re-alignment and recent drain tile upgrades, agricultural land management activities such as cultivation, and tire ruts from farm machinery. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 14 – Native Species

Acer negundo--Boxelder
Rorippa palustris--Rough marsh cress
Veronica peregrina--Purslane speedwell

PCA 14 cont.

NON-Native Species

Glycine max--Soy-bean (planted but not harvested)

Total number of plant species: 4

Number of alien, or non-native, plant species: 1 (25 percent)

This approximately 0.25-acre wetland plant community area consists of atypical (farmed) wetland. Disturbances to the plant community area include siltation and sedimentation due to stormwater runoff from adjacent lands, agricultural land management activities such as cultivation, and tire ruts from farm machinery. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 15 – Native Species

Acer negundo--Boxelder

Acer saccharinum--Silver maple

Achillea millefolium--Yarrow

Agrimonia gryposepala--Agrimony

Amaranthus retroflexus--Redroot pigweed

Ambrosia trifida--Giant ragweed

Apios americana--Ground nut

Asclepias syriaca--Common milkweed

Carex blanda--Wood sedge

Carex grisea--Wood gray sedge

Carex hirtifolia--Hairy wood sedge

Carex lacustris--Lake sedge

Carex radiata--Straight-styled wood sedge

Carex stricta--Tussock sedge

Carpinus caroliniana--Musclewood

Carya ovata--Shagbark hickory

Chenopodium album--Lamb's quarters

Cinna arundinacea--Wood reed grass

Circaea canadensis--Enchanter's nightshade

Cornus alba--Red-osier dogwood

Cornus racemosa--Gray dogwood

Crataegus mollis--Downy hawthorn

Crataegus sp.--Hawthorn

Cyperus esculentus--Chufa

Echinocystis lobata--Wild cucumber

Elymus villosus--Silky wild rye

Epilobium coloratum--Willow-herb

Equisetum arvense--Common horsetail

Euthamia graminifolia--Grass-leaved goldenrod

Eutrochium maculatum--Joe-Pye weed

Fraxinus pennsylvanica--Green ash

Geum canadense--White avens

Glyceria striata--Fowl manna grass

Hackelia virginiana--Stickseed

Hydrophyllum virginianum--Virginia waterleaf

Impatiens capensis--Jewelweed

Ostrya virginiana--Ironwood

Oxypolis rigidior--Cowbane

Native Species

Panicum dichotomiflorum--Knee grass
Parthenocissus inserta--Virginia creeper
Populus deltoides--Cottonwood
Populus tremuloides--Quaking aspen
Quercus bicolor--Swamp white oak
Ribes americanum--Wild black currant
Rubus occidentalis--Black raspberry
Salix bebbiana--Beaked willow
Salix interior--Sandbar willow
Salix nigra--Black willow
Solidago altissima--Tall goldenrod
Solidago gigantea--Giant goldenrod
Symphotrichum lanceolatum--Marsh aster
Symphotrichum lateriflorum--Calico aster
Symphotrichum novae-angliae--New England aster
Symphotrichum puniceum--Red-stemmed aster
Tilia americana--Basswood
Typha latifolia--Broad-leaved cat-tail
Ulmus americana--American elm
Urtica dioica--Stinging nettle
Verbena hastata--Blue vervain
Veronica peregrina--Purslane speedwell
Viola affinis--Leconte's violet
Vitis riparia--Riverbank grape
Zanthoxylum americanum--Prickly-ash

NON-Native Species

Abutilon theophrasti--Velvet-leaf
Acer ginnala--Amur maple
Agrostis gigantea--Redtop grass
Alliaria petiolata--Garlic-mustard
Cirsium arvense--Canada thistle
Datura stramonium--Jimson-weed
Daucus carota--Queen Anne's lace
Frangula alnus--Glossy buckthorn
Leonurus cardiaca--Motherwort
Lonicera X bella--Hybrid honeysuckle
Malva neglecta--Cheeses
Phalaris arundinacea--Reed canary grass
Picea abies--Norway spruce (planted)
Poa pratensis--Kentucky bluegrass
Rhamnus cathartica--Common buckthorn
Rosa multiflora--Multiflora rose
Rumex crispus--Curly dock
Setaria faberj--Giant foxtail
Setaria sp.--Foxtail
Taraxacum officinale--Common dandelion
Zea mays--Domestic corn (planted and harvested)

PCA 15 cont.

Total number of plant species: 84

Number of alien, or non-native, plant species: 21 (25 percent)

This approximately 26.7-acre plant community area is part of a larger floodplain-wetland complex associated with an unnamed tributary to Spring Creek and consists of open water, fresh (wet) meadow, atypical (farmed) wetland, shrub-carr (willow thicket), and hardwood swamp. Disturbances to the plant community area include side casting of dredge spoil materials from adjacent stream channel re-alignment, siltation and sedimentation due to stormwater runoff from adjacent lands, water level changes due to channel re-alignment and tiling, agricultural land management activities such as cultivation, and tire ruts from farm machinery. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

Plant Community Area No. 16 – Native Species

Acer negundo--Boxelder

Arisaema triphyllum--Jack-in-the-pulpit

Carex blanda--Wood sedge

Carya cordiformis--Yellowbud hickory

Circaea canadensis--Enchanter's nightshade

Cryptotaenia canadensis--Honewort

Elymus villosus--Silky wild rye

Fraxinus pennsylvanica--Green ash

Geum canadense--White avens

Impatiens capensis--Jewelweed

Maianthemum stellatum--Starry Solomon's plume

Prunus serotina--Black cherry

Ranunculus hispidus--Bristly buttercup

Symphotrichum lateriflorum--Calico aster

Symplocarpus foetidus--Skunk cabbage

Tilia americana--Basswood

Ulmus americana--American elm

Urtica dioica--Stinging nettle

Viola affinis--Leconte's violet

Viola sororia--Woolly blue violet

Vitis riparia--Riverbank grape

NON-Native Species

Alliaria petiolata--Garlic mustard

Arctium minus--Common burdock

Lonicera X bella--Hybrid honeysuckle

Phalaris arundinacea--Reed canary grass

Rhamnus cathartica--Common buckthorn

Rosa multiflora--Multiflora rose

Total number of plant species: 27

Number of alien, or non-native, plant species: 6 (29 percent)

PCA 16 cont.

This approximately 0.83-acre plant community area is part of a larger wetland complex and consists of a hillside with hardwood swamp and spring seeps. Disturbances to the plant community area include selective cutting of trees and siltation and sedimentation due to stormwater runoff from adjacent lands. No Federal- or State-designated Special Concern, Threatened, or Endangered species were observed during the field inspection.

SVY4555
CA734-208

Exhibit 8.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 1
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): none Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
--	---

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: While the sample site is on a riparian toeslope in the FEMA-mapped floodway, the site is effectively drained by the deeply cut (dredged) waterway. As such, geomorphic position (D2) is not checked. No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. <u>Taraxacum officinale</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Sonchus arvensis</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Daucus carota</u>	<u>5</u>	<input type="checkbox"/>	<u>UPL</u>	
4. <u>Ambrosia trifida</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>	
5. <u>Phalaris arundinacea</u>	<u>2</u>	<input type="checkbox"/>	<u>FACW</u>	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>26</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Remarks: (include photo number here or on a separate sheet.) Stubble from the previous season's corn (Zea mays) crop was present. Agricultural field.				

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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-7-2019

Applicant/Owner: _____

State: WI

Sampling Point: 2

Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): tributary to Spring Creek

Local relief (concave, convex, none): linear, concave

Slope (%): 0-2%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Palms muck (Pa)

NWI classification: 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 2</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? Yes No Depth (inches): 7
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks: Sample site is on the creek bed of a deeply-cut unnamed tributary to Spring Creek and in the FEMA-mapped floodway.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. <u>Phalaris arundinacea</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Barbarea vulgaris</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>17</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Open water of an unnamed tributary to Spring Creek with degraded fresh (wet) meadow along the edge.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-7-2019

Applicant/Owner: _____

State: WI

Sampling Point: 3

Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): shoulder slope

Local relief (concave, convex, none): convex

Slope (%): 0-3%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Lamartine silt loam (LmB)

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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
--	--

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (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 – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-7-2019

Applicant/Owner: _____

State: WI

Sampling Point: 4

Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): tributary to Spring Creek

Local relief (concave, convex, none): linear, concave

Slope (%): 0-3%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Lamartine silt loam (LmB)

NWI classification: E2K

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** No (If no, explain in Remarks)

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? **Yes** No

(If, needed, explain any answers in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic?

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

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 2</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? **Yes** No Depth (inches): 17
 Saturation Present? **Yes** No Depth (inches): 10
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks: The long rectangular sample plot is on the edge of a creek bed that exhibits areas with sediment deposits. Therefore, soils were able to be assessed and indicators A2 and A3 applied. The waterway lies just outside the plot and is about 5 inches deep. However, is not included in the FEMA floodway/floodplain mapping.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. <u>Sambucus nigra</u>	<u>3</u>	<input type="checkbox"/>	<u>FACW</u>		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>3</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Phalaris arundinacea</u>	<u>70</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Typha angustifolia</u>	<u>5</u>	<input type="checkbox"/>	<u>OBL</u>		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>75</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height					
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Remarks: (include photo number here or on a separate sheet.) Degraded fresh (wet) meadow.					

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/2	85	10YR 4/6	5	C	PL M	Silty clay loam	
	10YR 5/2	10						
6-10	2.5Y 5/2	75	10YR 5/6	5	C	PL M	Silty clay loam	
	10YR 3/2	20						
10-18	5Y 5/2	80	10YR 4/6	20	C	PL M	Silty clay loam	with disintegrating dolomite
18+								Too wet to pull up.

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)**
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 5
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>22</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>19</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (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 – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-7-2019

Applicant/Owner: _____

State: WI

Sampling Point: 6

Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): drainageway (grassed swale)

Local relief (concave, convex, none): linear, concave

Slope (%): 0-3%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Lamartine silt loam (LmB)

NWI classification: E2K

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** No (If no, explain in Remarks)

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? **Yes** No

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

(If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 1</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Agrostis gigantea</u>	<u>80</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Poa pratensis</u>	<u>20</u>	<input type="checkbox"/>	<u>FACU</u>	
3. <u>Rumex crispus</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>102</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is $\leq 3.0^1$

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) The sample site is in a grassed swale that is mowed when dry enough. Degraded fresh (wet) meadow.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-7-2019

Applicant/Owner: _____

State: WI

Sampling Point: Z

Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): slight hillslope

Local relief (concave, convex, none): linear

Slope (%): 0-3%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Lamartine silt loam (LmB)

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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		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 = _____	
Sapling/Shrub Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: 5' radius)					
1. <u>Glechoma hederacea</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
2. <u>Poa pratensis</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
3. <u>Trifolium repens</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
4. <u>Schedonorus arundinaceus</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>		
5. <u>Taraxacum officinale</u>	<u>8</u>	<input type="checkbox"/>	<u>FACU</u>		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>103</u>	= Total Cover			
Woody Vine Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					

Remarks: (include photo number here or on a separate sheet.) Mowed lawn.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 8
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear concave Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 1</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site has significantly disturbed vegetation due to mowing.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>9</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Sample site is part of a ground water seepage area.

	Absolute % Cover	Dominant Species?	Indicator Status																									
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>2</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><u>Total % Cover of:</u></td> <td style="text-align:right;"><u>Multiply by:</u></td> <td></td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 =</td> <td><u>100</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 =</td> <td><u>0</u></td> </tr> <tr> <td>FACU species <u>53</u></td> <td>x 4 =</td> <td><u>212</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals: <u>103</u> (A)</td> <td></td> <td><u>312</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align:right;">Prevalence Index = B/A = <u>3.03</u></td> </tr> </table> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<u>Total % Cover of:</u>	<u>Multiply by:</u>		OBL species <u>0</u>	x 1 =	<u>0</u>	FACW species <u>50</u>	x 2 =	<u>100</u>	FAC species <u>0</u>	x 3 =	<u>0</u>	FACU species <u>53</u>	x 4 =	<u>212</u>	UPL species <u>0</u>	x 5 =	<u>0</u>	Column Totals: <u>103</u> (A)		<u>312</u> (B)	Prevalence Index = B/A = <u>3.03</u>		
<u>Total % Cover of:</u>	<u>Multiply by:</u>																											
OBL species <u>0</u>	x 1 =	<u>0</u>																										
FACW species <u>50</u>	x 2 =	<u>100</u>																										
FAC species <u>0</u>	x 3 =	<u>0</u>																										
FACU species <u>53</u>	x 4 =	<u>212</u>																										
UPL species <u>0</u>	x 5 =	<u>0</u>																										
Column Totals: <u>103</u> (A)		<u>312</u> (B)																										
Prevalence Index = B/A = <u>3.03</u>																												
1. _____	_____	<input type="checkbox"/>	_____																									
2. _____	_____	<input type="checkbox"/>	_____																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
5. _____	_____	<input type="checkbox"/>	_____																									
6. _____	_____	<input type="checkbox"/>	_____																									
7. _____	_____	<input type="checkbox"/>	_____																									
	<u>0</u>	= Total Cover																										
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)																												
1. _____	_____	<input type="checkbox"/>	_____																									
2. _____	_____	<input type="checkbox"/>	_____																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
5. _____	_____	<input type="checkbox"/>	_____																									
6. _____	_____	<input type="checkbox"/>	_____																									
7. _____	_____	<input type="checkbox"/>	_____																									
	<u>0</u>	= Total Cover																										
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)																												
1. <u>Agrostis gigantea</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FACW</u>																									
2. <u>Poa pratensis</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FACU</u>																									
3. <u>Taraxacum officinale</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>																									
4. _____	_____	<input type="checkbox"/>	_____																									
5. _____	_____	<input type="checkbox"/>	_____																									
6. _____	_____	<input type="checkbox"/>	_____																									
7. _____	_____	<input type="checkbox"/>	_____																									
8. _____	_____	<input type="checkbox"/>	_____																									
9. _____	_____	<input type="checkbox"/>	_____																									
10. _____	_____	<input type="checkbox"/>	_____																									
11. _____	_____	<input type="checkbox"/>	_____																									
12. _____	_____	<input type="checkbox"/>	_____																									
	<u>103</u>	= Total Cover																										
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)																												
1. _____	_____	<input type="checkbox"/>	_____																									
2. _____	_____	<input type="checkbox"/>	_____																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
	<u>0</u>	= Total Cover																										
<p>Remarks: (include photo number here or on a separate sheet.) The sample site is in a ground water seepage area that exhibits wetland hydrology and hydric soil indicators. However, regular mowing has prevented hydrophytic vegetation from becoming dominant. As a result, the sample site is determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (mowed) wetland.</p>																												

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-7-2019

Applicant/Owner: _____

State: WI

Sampling Point: 9

Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): hillslope

Local relief (concave, convex, none): convex

Slope (%): 0-3%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Lamartine silt loam (LmB)

NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** No (If no, explain in Remarks)

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? **Yes** No

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

(If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>23</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>19</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Poa pratensis</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Taraxacum officinale</u>	<u>15</u>	<input type="checkbox"/>	<u>FACU</u>		
3. <u>Trifolium repens</u>	<u>15</u>	<input type="checkbox"/>	<u>FACU</u>		
4. <u>Schedonorus arundinaceus</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>100</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					

Remarks: (include photo number here or on a separate sheet.) Mowed lawn.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1	100					Silt loam	
5-11	10YR 3/2	80					Silt loam	
	10YR 5/3	20						
11-25	2.5Y 3/1	70					Silt loam	
	10YR 5/3	30						

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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: Observed soil profile may consist of old fill material for driveway maintenance. No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 10
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>21</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (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 – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 11
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 1</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-7-2019

Applicant/Owner: _____

State: WI

Sampling Point: 12

Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): slight slope/swale

Local relief (concave, convex, none): linear, concave

Slope (%): 2-6%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Theresa silt loam (ThB2)

NWI classification: 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks: Only one secondary wetland hydrology indicator was observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Trifolium repens</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Poa annua</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Taraxacum officinale</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
4. <u>Echinochloa crus-galli</u>	<u>10</u>	<input type="checkbox"/>	<u>FAC</u>	
5. <u>Arctium minus</u>	<u>8</u>	<input type="checkbox"/>	<u>FACU</u>	
6. <u>Capsella bursa-pastoris</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>	
7. <u>Dactylis glomerata</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>	
8. <u>Cirsium vulgare</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>91</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				

Remarks: (include photo number here or on a separate sheet.) Old field.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-7-2019

Applicant/Owner: _____

State: WI

Sampling Point: 13

Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): drainageway

Local relief (concave, convex, none): linear, concave

Slope (%): 2-6%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Theresa silt loam (ThB2)

NWI classification: E2K

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** No (If no, explain in Remarks)

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? **Yes** No

(If, needed, explain any answers in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic?

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

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 2</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13.5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: The sample site is in a small meandering drainageway that has formed within a larger linear concave (swale) landscape which receives barnyard runoff.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 14
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): berm (dredge spoils) Local relief (concave, convex, none): convex Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (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 – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 15
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Only one secondary wetland hydrology indicator was observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Phalaris arundinacea</u>	<u>65</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>65</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					

Remarks: (include photo number here or on a separate sheet.) Old field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/1	100					Silt loam	dredge spoil
12-18	10YR 3/1	95	10YR 4/6	5	C	PL M	Silty clay loam	dredge spoil
18-25	10YR 5/2	50	10YR 5/6	25	C	PL M	Clay loam	
	10YR 3/2	25						

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 16
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): drainageway (trib. to Spring Creek) Local relief (concave, convex, none): linear, concave Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) NWI classification: 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 2</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Sample site is on the bed of the unnamed tributary to Spring Creek. However, this small branch is not part of the FEMA-mapped floodway/floodplain.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 17
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): berm (dredge spoils) Local relief (concave, convex, none): convex Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Phalaris arundinacea</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Bromus inermis</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	
3. <u>Asclepias syriaca</u>	<u>10</u>	<input type="checkbox"/>	<u>UPL</u>	
4. <u>Vitis riparia</u>	<u>5</u>	<input type="checkbox"/>	<u>FAC</u>	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>100</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Old field.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 18
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): small depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 4</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

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

Remarks: While the sample site is in a slight depression, geomorphic position (D2) is not checked due to the presence of a drain tile system (see Exhibit 14).

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 2/1	100					Silt loam	
10-13	10YR 2/1	95	2.5Y 5/4	5	C	PL M	Silty clay loam	
13-19	10YR 4/1	90	10YR 4/6	10	C	PL M	Clay loam	
19+								Too wet to pull up.

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-7-2019

Applicant/Owner: _____

State: WI

Sampling Point: 19

Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): slight hillslope

Local relief (concave, convex, none): linear, convex

Slope (%): 0-2%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Palms muck (Pa)

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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Drain tile work has been completed within the last 5 years in close proximity to the sample site (see Exhibit 14). Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. <u>Ambrosia trifida</u>	<u>4</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Ranunculus sceleratus</u>	<u>4</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>8</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Remarks: (include photo number here or on a separate sheet.) Agricultural field.				

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:

<u>Total % Cover of:</u>	<u>Multiply by:</u>
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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-17	10YR 2/1	100					Silt loam	
17-25	N 2.5/	100					Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LLR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
 - Dark Surface (S7) (LRR K, L)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators 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 thick dark surface (A12) might have been observed if the pit was excavated to greater depth, this was unnecessary given that wetland hydrology was not present. No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 20
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope (slight swale) Local relief (concave, convex, none): linear, concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 4</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>22.5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: Recent Iron Reduction in Tilled Soils (C6) indicator not checked since the timing of the last tillage could not be determined. Drain Tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14).

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 21
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 4</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Soils were naturally problematic as they were too wet to pull up from a depth greater than 20 inches.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: Sample site was found to be in a ground water seepage area. Drain Tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. <u>Ranunculus sceleratus</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
2. <u>Ambrosia trifida</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
<u>4</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 22
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): excavated pond Local relief (concave, convex, none): concave Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) NWI classification: E2/W0H
 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 3</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Pond excavation apparent on year 2000 aerial photo (Exhibit 4E).

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>12</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Phalaris arundinacea</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Rumex crispus</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>63</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) Degraded fresh (wet) meadow.				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 23
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): berm Local relief (concave, convex, none): convex Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The berm consists of dredge spoils from the pond excavation immediately north of the sample site.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. Ambrosia trifida	<u>60</u>	<input checked="" type="checkbox"/>	FAC	
2. <u>Galium aparine</u>	<u>15</u>	<input type="checkbox"/>	FACU	
3. <u>Setaria faberi</u>	<u>10</u>	<input type="checkbox"/>	FACU	
4. <u>Alliaria petiolata</u>	<u>5</u>	<input type="checkbox"/>	FACU	
5. <u>Arctium minus</u>	<u>3</u>	<input type="checkbox"/>	FACU	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>93</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Old field.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 24
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site is impacted by slurry discharge/spreading of manure.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>*12.5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).	
Remarks: <u>Algae/algal crust observed in tire ruts.</u>	

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) The sample site area was devoid of vegetation and exhibited evidence of multiple/heavy manure applications over time. Agricultural field.				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: State: WI Sampling Point: 25
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 4</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Recent Iron Reduction in Tilled Soils (C6) indicator not checked since the timing and the depth of the last tillage could not be determined. Drain Tile work was completed in close proximity to this sample site within the last 5 years (see Exhibit 14).

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
		<u>0</u>	= Total Cover

Sapling/Shrub Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
		<u>0</u>	= Total Cover

Herb Stratum (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ambrosia trifida	<u>3</u>	<input checked="" type="checkbox"/>	FAC
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
		<u>3</u>	= Total Cover

Woody Vine Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
		<u>0</u>	= 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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/1	100					Silt loam	
6-18	10YR 3/1	95	10YR 3/4	5	C	PL M	Silt loam	
18-25	2.5Y 2.5/1	95	10YR 5/1	5	D	M	Silt loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 26
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 4</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site has significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Sample site is in a ground water seepage area. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <u>Total % Cover of:</u> <u>Multiply by:</u> OBL species _____ x 1 = _____
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	FACW species _____ x 2 = _____
2. _____	_____	<input type="checkbox"/>	_____	FAC species _____ x 3 = _____
3. _____	_____	<input type="checkbox"/>	_____	FACU species _____ x 4 = _____
4. _____	_____	<input type="checkbox"/>	_____	UPL species _____ x 5 = _____
5. _____	_____	<input type="checkbox"/>	_____	Column Totals: _____ (A) _____ (B)
6. _____	_____	<input type="checkbox"/>	_____	Prevalence Index = B/A = _____
7. _____	_____	<input type="checkbox"/>	_____	
	_____	= Total Cover		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Remarks: (include photo number here or on a separate sheet.) Sample site has only last season's corn (Zea mays) stubble present. The site exhibits wetland hydrology indicators and has a hydric soil. Therefore, the site was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	100					Silt loam	
8-20	N 2.5/	100					Silt loam	
20-27	5Y 5/2	93	10YR 4/6	7	C	PL M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 27
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>24</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Drain tile work completed in the vicinity of this sample site within the last 5 years (see Exhibit 14). No wetland hydrology indicators observed

	Absolute % Cover	Dominant Species?	Indicator Status			
Tree Stratum (Plot size: <u>30'</u> radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>0</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <p style="text-align: center;"><u>0</u> = Total Cover</p> <table style="width:100%; border: none;"> <tr> <td style="text-align: right;"><u>0</u></td> <td style="text-align: center;">= Total Cover</td> </tr> </table>	<u>0</u>	= Total Cover
<u>0</u>	= Total Cover					
1. _____	_____	<input type="checkbox"/>	_____			
2. _____	_____	<input type="checkbox"/>	_____			
3. _____	_____	<input type="checkbox"/>	_____			
4. _____	_____	<input type="checkbox"/>	_____			
5. _____	_____	<input type="checkbox"/>	_____			
6. _____	_____	<input type="checkbox"/>	_____			
7. _____	_____	<input type="checkbox"/>	_____			
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)						
1. _____	_____	<input type="checkbox"/>	_____			
2. _____	_____	<input type="checkbox"/>	_____			
3. _____	_____	<input type="checkbox"/>	_____			
4. _____	_____	<input type="checkbox"/>	_____			
5. _____	_____	<input type="checkbox"/>	_____			
6. _____	_____	<input type="checkbox"/>	_____			
7. _____	_____	<input type="checkbox"/>	_____			
Herb Stratum (Plot size: <u>5'</u> radius)						
1. _____	_____	<input type="checkbox"/>	_____			
2. _____	_____	<input type="checkbox"/>	_____			
3. _____	_____	<input type="checkbox"/>	_____			
4. _____	_____	<input type="checkbox"/>	_____			
5. _____	_____	<input type="checkbox"/>	_____			
6. _____	_____	<input type="checkbox"/>	_____			
7. _____	_____	<input type="checkbox"/>	_____			
8. _____	_____	<input type="checkbox"/>	_____			
9. _____	_____	<input type="checkbox"/>	_____			
10. _____	_____	<input type="checkbox"/>	_____			
11. _____	_____	<input type="checkbox"/>	_____			
12. _____	_____	<input type="checkbox"/>	_____			
Woody Vine Stratum (Plot size: <u>30'</u> radius)						
1. _____	_____	<input type="checkbox"/>	_____			
2. _____	_____	<input type="checkbox"/>	_____			
3. _____	_____	<input type="checkbox"/>	_____			
4. _____	_____	<input type="checkbox"/>	_____			
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>						
Remarks: (include photo number here or on a separate sheet.) Agricultural field with previous year's corn stubble. No live vegetation.						

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-13	10YR 2/1	100					Silt loam	with gravel
13-27	5Y 4/2	92	10YR 4/6	8	C	PL M	Silty clay loam	with gravel

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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 sample site area has lots of cobbles and rocks (6 inches and larger) on the soil surface.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 28
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 4</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site has significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>24</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Sample site is in a ground water seepage area. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u>		= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u>		= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
<u>0</u>		= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
<u>0</u>		= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) No live vegetation - only last season's corn (Zea mays) stubble is present. The site exhibits wetland hydrology indicators and has a hydric soil. Therefore, the site was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-17	10YR 2/1	100					Silt loam	
17-27	5Y 5/2	85	10YR 5/6	15	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-7-2019
 Applicant/Owner: _____ State: WI Sampling Point: 29
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 2-6%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Dodge silt loam (DdB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>28</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Recent Iron Reduction in Tilled Soils (C6) indicator not checked since the timing and the depth of the last tillage could not be determined. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14). No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Taraxacum officinale</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Ranunculus sceleratus</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>3</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= 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:
 Rapid Test for Hydrophytic Vegetation
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:
Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height
Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 3/1	100					Silt loam	
7-12	10YR 2/1	93	10YR 5/4	7	C	M	Silty clay loam	
12-17	10YR 5/2	80	10YR 5/6	20	C	M	Silty clay loam	
17-20	10YR 4/1	80	10YR 5/6	20	C	M	Silt loam	
20-29	2.5Y 6/2	75	10YR 4/6	25	C	M	Sandy loam	with grit

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 30
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14). No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status			
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>0</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <p style="text-align: center;"><u>0</u> = Total Cover</p> <table style="width:100%; border: none;"> <tr> <td style="text-align: right;"><u>0</u></td> <td style="text-align: center;">= Total Cover</td> </tr> </table>	<u>0</u>	= Total Cover
<u>0</u>	= Total Cover					
1. _____	_____	<input type="checkbox"/>	_____			
2. _____	_____	<input type="checkbox"/>	_____			
3. _____	_____	<input type="checkbox"/>	_____			
4. _____	_____	<input type="checkbox"/>	_____			
5. _____	_____	<input type="checkbox"/>	_____			
6. _____	_____	<input type="checkbox"/>	_____			
7. _____	_____	<input type="checkbox"/>	_____			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)						
1. _____	_____	<input type="checkbox"/>	_____			
2. _____	_____	<input type="checkbox"/>	_____			
3. _____	_____	<input type="checkbox"/>	_____			
4. _____	_____	<input type="checkbox"/>	_____			
5. _____	_____	<input type="checkbox"/>	_____			
6. _____	_____	<input type="checkbox"/>	_____			
7. _____	_____	<input type="checkbox"/>	_____			
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)						
1. _____	_____	<input type="checkbox"/>	_____			
2. _____	_____	<input type="checkbox"/>	_____			
3. _____	_____	<input type="checkbox"/>	_____			
4. _____	_____	<input type="checkbox"/>	_____			
5. _____	_____	<input type="checkbox"/>	_____			
6. _____	_____	<input type="checkbox"/>	_____			
7. _____	_____	<input type="checkbox"/>	_____			
8. _____	_____	<input type="checkbox"/>	_____			
9. _____	_____	<input type="checkbox"/>	_____			
10. _____	_____	<input type="checkbox"/>	_____			
11. _____	_____	<input type="checkbox"/>	_____			
12. _____	_____	<input type="checkbox"/>	_____			
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)						
1. _____	_____	<input type="checkbox"/>	_____			
2. _____	_____	<input type="checkbox"/>	_____			
3. _____	_____	<input type="checkbox"/>	_____			
4. _____	_____	<input type="checkbox"/>	_____			
<u>0</u> = Total Cover						

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) No live vegetation - only stubble from last year's corn crop. Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/1	100					Silt loam	
6-11	2.5Y 2.5/1	100					Silt loam	
11-15	2.5Y 2.5/1	97	10YR 3/4	3	C	M	Silty clay loam	
15-25	10YR 5/1	95	10YR 5/6	5	C	PL M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 31
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 4</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The site has significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Surface water of up to an inch in depth was observed near the sample plot. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>0</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <p style="text-align: center;"><u>0</u> = Total Cover</p> <p style="text-align: center;">Total % Cover of: Multiply by:</p> <p>OBL species _____ x 1 = _____</p> <p>FACW species _____ x 2 = _____</p> <p>FAC species _____ x 3 = _____</p> <p>FACU species _____ x 4 = _____</p> <p>UPL species _____ x 5 = _____</p> <p>Column Totals: _____ (A) _____ (B)</p> <p style="text-align: center;">Prevalence Index = B/A = _____</p> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<p>Remarks: (include photo number here or on a separate sheet.) Sample site is in an active farm field where only last season's corn (Zea mays) stubble was present. The site exhibited wetland hydrology indicators and had a hydric soil. Therefore, the site was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.</p>				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	N 2.5/	100					Silt loam	
5-10	N 2.5/	100					Silty clay loam	
10-14	N 2.5/	97	10YR 4/6	3	C	M	Clay loam	
14-19	2.5Y 5/1	88	5GY 5/1	7	D	M	Clay loam	
			10YR 4/6	5	C	M		
19-24	5Y 5/2	83	5GY 5/1	10	D	M	Clay loam	
			10YR 4/6	7	C	M		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 32
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>25</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>21</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 10 out of 10 (100%) images taken with normal antecedent precipitation. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14). Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>0</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <p style="text-align: center;"><u>0</u> = Total Cover</p> <p style="text-align: center;">Total % Cover of: Multiply by:</p> <p>OBL species _____ x 1 = _____</p> <p>FACW species _____ x 2 = _____</p> <p>FAC species _____ x 3 = _____</p> <p>FACU species _____ x 4 = _____</p> <p>UPL species _____ x 5 = _____</p> <p>Column Totals: _____ (A) _____ (B)</p> <p style="text-align: center;">Prevalence Index = B/A = _____</p> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<p>Remarks: (include photo number here or on a separate sheet.) Last season's corn (Zea mays) stubble is present. Agricultural field with no live vegetation present.</p>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-13-2019

Applicant/Owner: _____

State: WI

Sampling Point: 33

Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): slight hillslope

Local relief (concave, convex, none): linear

Slope (%): 0-2%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Palms muck (Pa)

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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 4</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site has significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>29</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signature on 10 out of 10 (100%) images taken with normal antecedent precipitation. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Dominance Test worksheet:				
Number of Dominant Species That are OBL, FACW, or FAC:				<u>0</u> (A)
Total Number of Dominant Species Across All Strata:				<u>0</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:				<u>0%</u> (A/B)
Prevalence Index worksheet:				
<u>Total % Cover of:</u>		<u>Multiply by:</u>		
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:				
<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation				
<input type="checkbox"/> Dominance Test is >50%				
<input type="checkbox"/> Prevalence Index is ≤3.0 ¹				
<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
<input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata:				
Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height				
Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.				
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.				
Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) The sample site is in an active farm field with only last season's corn (Zea mays) stubble present. The site exhibits wetland hydrology indicators and has a hydric soil. Therefore, it was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	N 2.5/	100					Silt loam	with traces of dolomite
14-28	5Y 5/2	85	10YR 4/6	5	C	M	Clay loam	
	N 2.5/	10						
28-33	2.5Y 5/2	97	10YR 4/6	3	C	M	Sandy loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 34
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope/footslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 5</u>
Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>31</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).	
Remarks: NAIP/FSA image review found the sample site exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14).	

	Absolute % Cover	Dominant Species?	Indicator Status				
Tree Stratum (Plot size: 30' radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>1</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table border="0"> <tr> <td><u>0</u></td> <td>= Total Cover</td> <td></td> </tr> </table> <p>Total % Cover of: Multiply by:</p> <p>OBL species x 1 = _____</p> <p>FACW species x 2 = _____</p> <p>FAC species x 3 = _____</p> <p>FACU species x 4 = _____</p> <p>UPL species x 5 = _____</p> <p>Column Totals: (A) (B)</p> <p>Prevalence Index = B/A = _____</p> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input checked="" type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<u>0</u>	= Total Cover	
<u>0</u>	= Total Cover						
1. _____	_____	<input type="checkbox"/>	_____				
2. _____	_____	<input type="checkbox"/>	_____				
3. _____	_____	<input type="checkbox"/>	_____				
4. _____	_____	<input type="checkbox"/>	_____				
5. _____	_____	<input type="checkbox"/>	_____				
6. _____	_____	<input type="checkbox"/>	_____				
7. _____	_____	<input type="checkbox"/>	_____				
Sapling/Shrub Stratum (Plot size: 30' radius)							
1. _____	_____	<input type="checkbox"/>	_____				
2. _____	_____	<input type="checkbox"/>	_____				
3. _____	_____	<input type="checkbox"/>	_____				
4. _____	_____	<input type="checkbox"/>	_____				
5. _____	_____	<input type="checkbox"/>	_____				
6. _____	_____	<input type="checkbox"/>	_____				
7. _____	_____	<input type="checkbox"/>	_____				
Herb Stratum (Plot size: 5' radius)							
1. <u>Veronica peregrina</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>FAC</u>				
2. _____	_____	<input type="checkbox"/>	_____				
3. _____	_____	<input type="checkbox"/>	_____				
4. _____	_____	<input type="checkbox"/>	_____				
5. _____	_____	<input type="checkbox"/>	_____				
6. _____	_____	<input type="checkbox"/>	_____				
7. _____	_____	<input type="checkbox"/>	_____				
8. _____	_____	<input type="checkbox"/>	_____				
9. _____	_____	<input type="checkbox"/>	_____				
10. _____	_____	<input type="checkbox"/>	_____				
11. _____	_____	<input type="checkbox"/>	_____				
12. _____	_____	<input type="checkbox"/>	_____				
Woody Vine Stratum (Plot size: 30' radius)							
1. _____	_____	<input type="checkbox"/>	_____				
2. _____	_____	<input type="checkbox"/>	_____				
3. _____	_____	<input type="checkbox"/>	_____				
4. _____	_____	<input type="checkbox"/>	_____				
<p><u>0</u> = Total Cover</p>							
<p>Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.</p>							

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	N 2.5/	100					Silt loam	
14-19	2.5Y 4/1	65	10YR 4/6	3	C	M	Clay loam	
	N 2.5/	22						
	10YR 3/3	10						
19-31	5Y 5/2	95	10YR 4/6	5	C	M	Clay loam	
31-32	5Y 5/2	95	10YR 4/6	5	C	M	Fine Sandy loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 35
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 4</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Vegetation is significantly disturbed due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>30</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= 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: 0 (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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) The sample site is in an active farm field with only last year's corn (Zea mays) stubble present. The site exhibits indicators of wetland hydrology and has a hydric soil. Therefore, the site was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	10YR 2/1	100					Silt loam	
3-13	10YR 2/1	100					Silty clay loam	
13-21	5Y 5/2	95	10YR 4/6	5	C	M	Clay loam	
21-31	5Y 5/1	83	5GY 5/1	10	D	M	Clay loam	
			10YR 4/6	7	C	M		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 36
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Unlike sample site 35, this soil pit had no seeping or glistening on its walls, indicating effectiveness of recent drain tile improvements (Exhibit 14). No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u>		= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u>		= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
<u>0</u>		= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
<u>0</u>		= Total Cover		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) Agricultural field with no live vegetation, only corn stubble from last year's crop.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 2/1	100					Silt loam	
12-19	10YR 4/1	97	2.5Y 4/4	3	C	M	Clay loam	
19-26	5Y 5/2	93	10YR 4/6	7	C	M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)**
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LLR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
 - Dark Surface (S7) (LRR K, L)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 37
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14). No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Veronica peregrina</u>	<u>2</u>	<input checked="" type="checkbox"/>	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>2</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Remarks: (include photo number here or on a separate sheet.) Agricultural field.					

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/1	100					Silt loam	
6-12	10YR 3/1	80	10YR 5/6	20	C	M	Clay loam	
12-16	10YR 4/1	85	10YR 4/6	15	C	M	Clay loam	with gravel
16-18	10YR 6/2	85	7.5YR 5/6	15	C	M	Clay loam	with gravel
18-24	10YR 5/2	70	10YR 5/8	20	C	M	Clay loam	with gravel
			10GY 6/1	10	D	M		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 38
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 4</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input checked="" type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>27</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.
 Geomorphic Position (D2) indicator not checked due to recent drain tile improvements (Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Ranunculus sceleratus</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
2. <u>Ambrosia trifida</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FAC</u>		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>4</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.					

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 39
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 5</u>
Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>28.5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).	
Remarks: NAIP/FSA image review found the sample site exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. Drain tile work completed in the vicinity of the sample site within the last 5 years (Exhibit 14).	

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. <u>Veronica peregrina</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Ambrosia trifida</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>12</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 40
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14). No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>3</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <p style="text-align: center;"><u>Total % Cover of:</u> <u>Multiply by:</u></p> <p>OBL species _____ x 1 = _____</p> <p>FACW species _____ x 2 = _____</p> <p>FAC species _____ x 3 = _____</p> <p>FACU species _____ x 4 = _____</p> <p>UPL species _____ x 5 = _____</p> <p>Column Totals: _____ (A) _____ (B)</p> <p style="text-align: center;">Prevalence Index = B/A = _____</p> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. <u>Ambrosia trifida</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Chenopodium album</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Taraxacum officinale</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>5</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Remarks: (include photo number here or on a separate sheet.) Agricultural field.				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 41
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): none Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (B1A) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>26</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14). Only one secondary wetland hydrology indicator was observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>0</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <p style="text-align: center;"><u>0</u> = Total Cover</p> <p style="text-align: center;">Total % Cover of: Multiply by:</p> <p>OBL species _____ x 1 = _____</p> <p>FACW species _____ x 2 = _____</p> <p>FAC species _____ x 3 = _____</p> <p>FACU species _____ x 4 = _____</p> <p>UPL species _____ x 5 = _____</p> <p>Column Totals: _____ (A) _____ (B)</p> <p style="text-align: center;">Prevalence Index = B/A = _____</p> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Remarks: (include photo number here or on a separate sheet.) Agricultural field with no live vegetation, only corn stubble from last year's crop.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 2/1	100					Silt loam	
16-26	2.5Y 4/2	97	10YR 4/6	3	C	M	Clay loam	with dolomite
26-27	2.5Y 4/2	97	10YR 4/6	3	C	M	Sandy loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 42
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BIA) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14). Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. <u>Ambrosia trifida</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Taraxacum officinale</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
<u>2</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				

Prevalence Index worksheet:

<u>Total % Cover of:</u>	<u>Multiply by:</u>
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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 2/1	100					Silt loam	
12-15	10YR 4/2	97	10YR 4/6	3	C	M	Clay loam	
15-24	2.5Y 5/2	97	7.5YR 5/6	3	C	M	Clay loam	with dolomite

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-13-2019

Applicant/Owner: _____

State: WI

Sampling Point: 43

Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): slight slope

Local relief (concave, convex, none): linear

Slope (%): 0-2%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Brookston silt loam (BIA)

NWI classification: FOKf

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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <div style="text-align: right;"> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div> If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface) to 7 only</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. Recently improved drain tiles in this area appear to be effective (Exhibit 14). Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined. Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. <u>Veronica peregrina</u>	<u>1</u>	<input checked="" type="checkbox"/>	FAC
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>1</u>	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	_____	= 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:
 Rapid Test for Hydrophytic Vegetation
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:
Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height
Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	N 2.5/	100					Silt loam	
7-18	5Y 2.5/1	75	10YR 5/2	20	D	M	Silty clay loam	
			10YR 4/6	5	C	M		
18-24	5Y 5/2	95	10YR 4/6	5	C	M	Clay loam	
24-26	10YR 5/6	65					Clay loam	
	10YR 5/2	35						

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)**
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-13-2019
 Applicant/Owner: _____ State: WI Sampling Point: 44
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): *toeslope/broad swale Local relief (concave, convex, none): linear, slightly concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (B1A) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 5</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample point is at a low point on the toeslope due to the slight berm (old dredge spoils) that runs parallel along the waterway. At this point, looking to the southeast we are in the top end of a broad swale. (No closed depression)

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>35</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA/ Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. This sample site is in the FEMA-mapped floodway associated with the unnamed tributary to Spring Creek. Geomorphic position (D2) is not checked due to the presence of a recently improved drain tile system (Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		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 = _____
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.
1. <u>Ranunculus sceleratus</u>	<u>2</u>	<input checked="" type="checkbox"/>	FAC	
2. <u>Ambrosia trifida</u>	<u>1</u>	<input checked="" type="checkbox"/>	FAC	
3. <u>Urtica dioica</u>	<u>1</u>	<input checked="" type="checkbox"/>	FAC	
4. <u>Veronica peregrina</u>	<u>1</u>	<input checked="" type="checkbox"/>	FAC	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>5</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-17	N 2.5/	100					Muck	
17-23	7.5YR 3/1	75					Clay loam	
	10YR 4/2	25						
23-26	10YR 4/2	70					Clay loam	
	7.5YR 3/1	30						
26-37	5Y 5/2	92	7.5YR 4/4	8	C	M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:		
<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)			
<input checked="" type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)			
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)			
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)			

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 45
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface) to 6 only</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. Recently improved drain tiles in this area appear to be effective (Exhibit 14). Only one secondary wetland hydrology indicator was observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: 5' radius)					
1. <u>Medicago lupulina</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Chenopodium album</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>3</u>	= Total Cover			
Woody Vine Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	10YR 2/1	100					Silt loam	
15-27	5Y 4/2	100					Clay loam	
27-29	5Y 4/2	97	2.5Y 6/4	3	C	M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LLR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
 - Dark Surface (S7) (LRR K, L)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators 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: As redox features were absent in most of the inspected depleted soil (second layer, above), no hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 46
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 5</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site has significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>25</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. Drain tile work completed in close proximity to this sample site within the last 5 years (Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) The sample site is in an active farm field and only has last season's corn (Zea mays) stubble. The site exhibits indicators of wetland hydrology and has a hydric soil. Therefore, the site is wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-17	N 2.5/	100					Loam	
17-26	5Y 4/2	95	10YR 5/6	5	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) **(LRR R, MLRA 149B)**

- Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

- 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- Coast Prairie Redox (A16) **(LLR K, L, R)**
- 5 cm Mucky Peat or Peat (S3) **(LLR K, L, R)**
- Dark Surface (S7) **(LRR K, L)**
- Polyvalue Below Surface (S8) **(LRR K, L)**
- Thin Dark Surface (S9) **(LRR K, L)**
- Iron-Manganese Masses (F12) **(LRR K, L, R)**
- Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 47
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface) to 6 only</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. However, drain tile improvements were made in the vicinity of the sample site within the last 5 years (Exhibit 14). Only one secondary wetland hydrology indicator was observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) Agricultural field with only previous year's corn stubble present.				

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

Table with columns: Depth (inches), Matrix (Color (moist), %), Redox Features (Color (moist), %, Type¹, Loc²), Texture, Remarks. Rows include data for depths 0-17 and 17-24 inches.

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

- List of indicators including Histosol (A1), Histic Epipedon (A2), Black Histic (A3), Hydrogen Sulfide (A4), Stratified Layers (A5), Depleted Below Dark Surface (A11), Thick Dark Surface (A12), Sandy Mucky Mineral (S1), Sandy Gleyed Matrix (S4), Sandy Redox (S5), Stripped Matrix (S6), Dark Surface (S7), Polyvalue Below Surface (S8), Thin Dark Surface (S9), Loamy Mucky Mineral (F1), Loamy Gleyed Matrix (F2), Depleted Matrix (F3), Redox Dark Surface (F6), Depleted Dark Surface (F7), Redox Depressions (F8), 2 cm Muck (A10), Coast Prairie Redox (A16), 5 cm Mucky Peat or Peat (S3), Dark Surface (S7), Polyvalue Below Surface (S8), Thin Dark Surface (S9), Iron-Manganese Masses (F12), Piedmont Floodplain Soils (F19), Mesic Spodic (TA6), Red Parent Material (F21), Very Shallow Dark Surface (TF12), and Other (Explain in Remarks).

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 48
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface) to 6 only</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).	
Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. However, drain tile improvements were made in the last 5 years (Exhibit 14). Only one secondary wetland hydrology indicator was observed.	

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <u>Total % Cover of:</u> <u>Multiply by:</u> 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 = _____	
Sapling/Shrub Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: 5' radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
Woody Vine Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: (include photo number here or on a separate sheet.) Agricultural field with only previous year's corn stubble present.					

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-24	2.5Y 2.5/1	100					Silt loam	
24-28	2.5Y 4/1	100					Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 49
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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 X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation _____, Soil X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 5</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site has naturally problematic soil due to a water table that limited the depth of inspection. Vegetation is significantly disturbed due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>22</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. A collapsed/blown out section of drain tile was observed near this sample site.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>0</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <p style="text-align: center;"><u>0</u> = Total Cover</p> <p style="text-align: center;">Total % Cover of: Multiply by:</p> <p>OBL species _____ x 1 = _____</p> <p>FACW species _____ x 2 = _____</p> <p>FAC species _____ x 3 = _____</p> <p>FACU species _____ x 4 = _____</p> <p>UPL species _____ x 5 = _____</p> <p>Column Totals: _____ (A) _____ (B)</p> <p style="text-align: center;">Prevalence Index = B/A = _____</p> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<p>Remarks: (include photo number here or on a separate sheet.) Sample site is in an active farm field and only corn (Zea mays) stubble is present. The site exhibits wetland hydrology indicators and naturally problematic hydric soil. Therefore, the site was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.</p>				

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 50
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 5</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site has significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>24</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. Drain tile work was completed in close proximity to this sample site within the last 5 years (see Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>0</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <p style="text-align: center;"><u>0</u> = Total Cover</p> <p style="text-align: center;">Total % Cover of: Multiply by:</p> <p>OBL species _____ x 1 = _____</p> <p>FACW species _____ x 2 = _____</p> <p>FAC species _____ x 3 = _____</p> <p>FACU species _____ x 4 = _____</p> <p>UPL species _____ x 5 = _____</p> <p>Column Totals: _____ (A) _____ (B)</p> <p style="text-align: center;">Prevalence Index = B/A = _____</p> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<p>Remarks: (include photo number here or on a separate sheet.) The sample site is in an active farm field and has only corn (Zea mays) stubble present. The site exhibits wetland hydrology indicators and has a hydric soil. Therefore, the site was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.</p>				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	2.5Y 2.5/1	100					Silt loam	
15-19	2.5Y 3/1	100					Clay loam	
19-25	2.5Y 4/1	90	10YR 4/6	10	C	M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 51
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface) to 6 only</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. However, drain tile improvements were completed within the last 5 years in close proximity to the sample site (Exhibit 14). Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	Prevalence Index worksheet: <u>Total % Cover of:</u> <u>Multiply by:</u> 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 = _____
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Taraxacum officinale</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
<u>2</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) Agricultural field.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	2.5Y 2.5/1	100					Silty clay loam	
12-16	2.5Y 3/1	100					Clay loam	
16-25	2.5Y 5/1	85	10YR 5/4	10	C	PL M	Clay loam	
			10YR 5/8	5	C	PL M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)**
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LLR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
 - Dark Surface (S7) (LRR K, L)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 52
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): drainageway Local relief (concave, convex, none): linear, concave Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 5</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site has significantly disturbed vegetation due to farming and scouring when stormwater runoff occurs.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface) to 2 only</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>0</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <p style="text-align: center;"><u>0</u> = Total Cover</p> <p style="text-align: center;">Total % Cover of: Multiply by:</p> <p>OBL species _____ x 1 = _____</p> <p>FACW species _____ x 2 = _____</p> <p>FAC species _____ x 3 = _____</p> <p>FACU species _____ x 4 = _____</p> <p>UPL species _____ x 5 = _____</p> <p>Column Totals: _____ (A) _____ (B)</p> <p style="text-align: center;">Prevalence Index = B/A = _____</p> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
<p>Remarks: (include photo number here or on a separate sheet.) Sample site is in an active farm field and only corn (Zea mays) stubble is present. Surface scouring has also prevented establishment of vegetation. The site exhibits wetland hydrology indicators and has a hydric soil. Therefore, the site was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.</p>				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	2.5Y 2.5/1	100					Silt loam	
8-26	2.5Y 5/2	65	10YR 5/8	35	C	M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- | | | |
|--|--|---|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | <ul style="list-style-type: none"> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) |
|--|--|---|

³Indicators 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: Shallow depleted layer, relative to other sample sites, is due to scouring/erosion of top soil at this location.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 53
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. However, drain tile work was completed in the vicinity of the sample site within the last 5 years (Exhibit 14). Only one secondary wetland hydrology indicator was observed.

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: 30' radius)																				
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
Sapling/Shrub Stratum (Plot size: 30' radius)																				
1. _____	_____	<input type="checkbox"/>	_____	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><u>Total % Cover of:</u></td> <td style="text-align:right;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = _____</td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	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 = _____	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
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 = _____																				
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
Herb Stratum (Plot size: 5' radius)																				
1. _____	_____	<input type="checkbox"/>	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.																
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
8. _____	_____	<input type="checkbox"/>	_____																	
9. _____	_____	<input type="checkbox"/>	_____																	
10. _____	_____	<input type="checkbox"/>	_____																	
11. _____	_____	<input type="checkbox"/>	_____																	
12. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
Woody Vine Stratum (Plot size: 30' radius)																				
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height																
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																
Remarks: (include photo number here or on a separate sheet.) Agricultural field with only stubble from previous year's corn crop present.																				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	2.5Y 2.5/1	100					Silt loam	
16-28	2.5Y 5/2	55	10YR 5/8	45	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 54
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 5</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site has significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>24</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>0</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <p style="text-align: center;"><u>0</u> = Total Cover</p> <p style="text-align: center;">Total % Cover of: Multiply by:</p> <p>OBL species _____ x 1 = _____</p> <p>FACW species _____ x 2 = _____</p> <p>FAC species _____ x 3 = _____</p> <p>FACU species _____ x 4 = _____</p> <p>UPL species _____ x 5 = _____</p> <p>Column Totals: _____ (A) _____ (B)</p> <p style="text-align: center;">Prevalence Index = B/A = _____</p> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<p>Remarks: (include photo number here or on a separate sheet.) The sample site is in an active farm field and has only corn (Zea mays) stubble present. The site exhibits wetland hydrology indicators and has a hydric soil. Therefore, the site was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.</p>				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	N 2.5/	100					Muck	
15-23	5Y 4/2	85	10YR 4/6	15	C	M	Clay loam	with dolomite
23-25	5Y 4/2	85	10YR 4/6	15	C	M	Loamy sand	with grit

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)**
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)**
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LLR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
 - Dark Surface (S7) (LRR K, L)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 55
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface) to 6 only</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. However, drain tile improvements were completed in the vicinity of the sample site within the last 5 years (Exhibit 14). Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. <u>Arctium minus</u>	1	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Medicago lupulina</u>	1	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>2</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= 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:

<u>Total % Cover of:</u>	<u>Multiply by:</u>
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:

- Rapid Test for Hydrophytic Vegetation
- Dominance Test is >50%
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	5Y 2.5/1	100					Silt loam	
15-25	5Y 5/2	93	2.5Y 5/4	7	C	M	Clay loam	
25-25	2.5Y 5/2	93	2.5Y 5/6	7	C	M	Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)			
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)			
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)			
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)			

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 56
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface) to 3 only</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in the FEMA-mapped floodway, but geomorphic position (D2) is not checked due to the presence of a drain tile system which was upgraded within the last 5 years (Exhibit 14). Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	Prevalence Index worksheet: <u>Total % Cover of:</u> <u>Multiply by:</u> 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 = _____
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
_____	<u>0</u>	= Total Cover		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. <u>Chenopodium album</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Ranunculus sceleratus</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
_____	<u>2</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
_____	<u>0</u>	= Total Cover		
Remarks: (include photo number here or on a separate sheet.) Agricultural field.				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	N 2.5/	100					Muck	
3-9	N 2.5/	100					Loam	
9-13	2.5Y 4/1	95	10YR 4/6	5	C	M	Clay loam	
13-27	5Y 4/2	93	10YR 4/6	7	C	M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)**
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)**
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 57
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 5</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Old broken clay drain tile pieces were found when digging the soil pit.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>28</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in the FEMA-mapped floodway, but geomorphic position (D2) is not checked due to the presence of a drain tile system which was upgraded within the last 5 years (Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. <u>Ambrosia trifida</u>	1	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Veronica peregrina</u>	1	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>2</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>2</u>	= Total Cover		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	N 2.5/	100					Muck	
12-17	2.5Y 3/1	97	10YR 4/4	3	C	M	Clay loam	
17-30	5Y 4/2	95	10YR 4/6	5	C	M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R)
<input checked="" type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input checked="" type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Red Parent Material (F21)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)			

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 58
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight berm Local relief (concave, convex, none): linear, convex Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site is situated on a berm of dredge spoils from the creek ditching/straightening.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>15</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in the FEMA-mapped floodway, but geomorphic position (D2) is not checked due to the convex position of the sample site and the presence of a recently upgraded drain tile system. Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Ambrosia trifida</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Urtica dioica</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. <u>Veronica peregrina</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>4</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) Agricultural field.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/1	100					Silt loam	
6-25	2.5Y 2.5/1	100					Silt loam	
25-26	10YR 3/2	84	10YR 3/6	8	C	M	Clay loam	
			10YR 5/2	8	D	M		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 59
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): broad swale Local relief (concave, convex, none): linear concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 5</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site is situated in a swale between higher lands to the north and a dredge spoil berm along the waterway to the south.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>25</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in the FEMA-mapped floodway, but geomorphic position (D2) is not checked due to the presence of a recently upgraded drain tile system (Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: 5' radius)					
1. <u>Ambrosia trifida</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
2. <u>Ranunculus sceleratus</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>OBL</u>		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	_____	= Total Cover			
Woody Vine Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	N 2.5/	100					Muck	
16-20	10YR 2/1	93	10YR 5/2	7	D	M	Silty clay loam	
20-31	2.5Y 4/2	80	2.5Y 5/4	20	C	M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: <input checked="" type="checkbox"/> Histosol (A1) <input checked="" type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input checked="" type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)		Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)	
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³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 60
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): Tributary to Spring Creek Local relief (concave, convex, none): linear, concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 2</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site has naturally problematic vegetation due to being in an unvegetated section of an unnamed tributary waterway.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: The sample site is in an unnamed tributary to Spring Creek (and in a FEMA-mapped floodway).

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Dominance Test worksheet:				
Number of Dominant Species That are OBL, FACW, or FAC:				<u>0</u> (A)
Total Number of Dominant Species Across All Strata:				<u>0</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:				<u>0%</u> (A/B)
Prevalence Index worksheet:				
<u>Total % Cover of:</u>		<u>Multiply by:</u>		
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:				
<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation				
<input type="checkbox"/> Dominance Test is >50%				
<input type="checkbox"/> Prevalence Index is ≤3.0 ¹				
<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
<input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata:				
Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height				
Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.				
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.				
Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) The sample site is in an unvegetated section of an unnamed tributary to Spring Creek. It exhibits indicators of wetland hydrology and has hydric soil due to inundation. Vegetative cover on the banks included: Impatiens capensis (FACW, 80%), Angelica atropurpurea (OBL, 50%), Ambrosia trifida (FAC, 10%), Phalaris arundinacea (FACW, 10%), and Barbarea vulgaris (FAC, 5%). The site was determined to be wetland with naturally problematic hydrophytic vegetation. Open water.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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 are inundated with 5 inches of water, hydric by definition - Criteria 3.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 61
 Investigator(s): Chris Jors, Shane Heyel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): tributary waterway Local relief (concave, convex, none): linear, concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 2</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site has naturally problematic vegetation due to being in an unvegetated section of an unnamed waterway.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Sample site is in an unnamed tributary to Spring Creek, and in the FEMA-mapped floodway.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <u>Total % Cover of:</u> <u>Multiply by:</u> 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 = _____	
Sapling/Shrub Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Herb Stratum (Plot size: 5' radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
Woody Vine Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks: (include photo number here or on a separate sheet.) The sample site is in an unvegetated section of an unnamed tributary to Spring Creek. It exhibits indicators of wetland hydrology and has hydric soil due to inundation. Vegetation cover on the bank included: Alliaria petiolata (FACU, 65%), Impatiens capensis (FACW, 35%), Angelica atropurpurea (OBL, 15%), Ambrosia trifida (FAC, 10%), Phalaris arundinacea (FACW, 10%), and Barbarea vulgaris (FAC, 5%). The site was determined to be wetland with naturally problematic hydrophytic vegetation. Open water.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- | | | |
|---|---|--|
| <p>Hydric Soil Indicators:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | <ul style="list-style-type: none"> <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) | <p>Indicators for Problematic Hydric Soils³:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input checked="" type="checkbox"/> Other (Explain in Remarks) |
|---|---|--|

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if observed): Type: _____ Depth (inches): _____</p>	<p>Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
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Remarks: Soils inundated with 6 inches of water, hydric by definition - Criteria 3.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 62
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight berm Local relief (concave, convex, none): linear, convex Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site is situated on a berm of dredge spoils from the creek ditching/straightening.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface) to 2 only</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in the FEMA-mapped floodway, but geomorphic position (D2) is not checked due to the convex position of the sample site and the presence of a recently upgraded drain tile system. Recent drain tile improvement in the area appears to be effective. Only one secondary indicator of wetland hydrology observed.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Ambrosia trifida	4	<input checked="" type="checkbox"/>	FAC
2. Veronica peregrina	1	<input checked="" type="checkbox"/>	FAC
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>5</u>	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= 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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-17	10YR 2/1	93	10YR 6/2	7	D	M	Silt loam	dredge spoils with shells
17-25	N 2.5/	95					Muck	
	7.5YR 3/3	5					Peat	inclusions

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 63
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): broad swale Local relief (concave, convex, none): linear concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 5</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site is situated in a broad swale between higher lands to the north and a dredge spoil berm along the waterway to the south.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>25</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in the FEMA-mapped floodway, but geomorphic position (D2) is not checked due to the presence of a recently upgraded drain tile system (Exhibit 14). Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Ambrosia trifida</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Ranunculus sceleratus</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>OBL</u>		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>3</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.					

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	2.5Y 2.5/1	100					Silt loam	
7-24	N 2.5/	94	10YR 5/6	3	C	M	Muck	
			10YR 5/2	3	D	M		
24-30	10YR 4/1	75	10YR 5/6	25	C	M	Silty clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)**
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 64
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 5</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site has significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>24</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. Drain tile work completed in close proximity to this sample site within the last 5 years (see Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	Prevalence Index worksheet: <u>Total % Cover of:</u> <u>Multiply by:</u> 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 = _____
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (include photo number here or on a separate sheet.) The sample site is in a farm field with only stubble from a previous corn crop. The site exhibited wetland hydrology indicators and had a hydric soil. Therefore, the site was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	2.5Y 2.5/1	100					Muck	
6-13	2.5Y 2.5/1	100					Silt loam	
13-25	5Y 5/2	87	10YR 5/6	8	C	M	Clay loam	
			10Y 5/1	5	D	M		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)**
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-14-2019
 Applicant/Owner: _____ State: WI Sampling Point: 65
 Investigator(s): Chris Jors, Shane Hevel, and Zofia Noe: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface) to 2 only</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. However, drain tile improvements were completed in the vicinity of sample site within the last 5 years (Exhibit 14). Only one secondary indicator of wetland hydrology observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: (include photo number here or on a separate sheet.) Agricultural field with only corn stubble from previous crop.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 2/1	100					Silt loam	
12-27	2.5Y 5/2	90	10YR 4/6	10	C	M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-15-2019

Applicant/Owner: _____

State: WI

Sampling Point: 66

Investigator(s): Chris Jors and Shane Hevel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): slight hillslope

Local relief (concave, convex, none): linear convex

Slope (%): 0-3%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Lamartine silt loam (LmB)

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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <div style="text-align: right;"> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div> If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
--	--

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks: Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined. No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Veronica peregrina</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Poa annua</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Acer negundo</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>	
4. <u>Alliaria petiolata</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>	
5. <u>Rhamnus cathartica</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>	
6. <u>Taraxacum officinale</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>29</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-13	10YR 2/2	95	7.5YR 4/6	5	C	PL M	Silt loam	
13-15	10YR 2/2	60	7.5YR 4/6	40	C	PL M	Silt loam	
15-19	10YR 2/2	95	7.5YR 4/6	5	C	PL M	Silt loam	
19-25	10YR 3/1	80	10YR 4/6	20	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-15-2019

Applicant/Owner: _____

State: WI

Sampling Point: 67

Investigator(s): Chris Jors and Shane Hevel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): Tributary to Spring Creek

Local relief (concave, convex, none): linear, concave

Slope (%): 0-3%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Lamartine silt loam (LmB)

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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 2</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site has naturally problematic vegetation due to an unvegetated section of a tributary waterway.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: This sample site is in an unnamed tributary to Spring Creek and the associated FEMA-mapped floodway.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (include photo number here or on a separate sheet.) The sample site is in an unvegetated section of an unnamed tributary to Spring Creek. It exhibits wetland hydrology indicators and has a hydric soil due to inundation. Vegetation on the banks included: <i>Acer negundo</i> (FAC), <i>Alliaria petiolata</i> (FACU), <i>Impatiens capensis</i> (FACW), and <i>Ribes cynosbati</i> (FACU). The site was determined to be wetland with naturally problematic hydrophytic vegetation. Open water.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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 are inundated with 6 inches of stream water, hydric by definition - Criteria 3.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-15-2019

Applicant/Owner: _____

State: WI

Sampling Point: 68

Investigator(s): Chris Jors and Shane Hevel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): broad swale

Local relief (concave, convex, none): linear, concave

Slope (%): 6-12%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Hochheim loam (HmC2)

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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. Geomorphic position (D2) is not checked due to the presence of a drain tile system, which has been recently improved in this area (Exhibit 14). Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined. Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. <u>Medicago lupulina</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Veronica peregrina</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. <u>Acer negundo</u>	<u>1</u>	<input type="checkbox"/>	<u>FAC</u>	
4. <u>Poa annua</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>6</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 3/1	100					Silt loam	
7-17	10YR 3/1	97	10YR 4/4	3	C	PL M	Silt loam	
17-26	5Y 5/2	85	10YR 5/6	15	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-15-2019

Applicant/Owner: _____

State: WI

Sampling Point: 69

Investigator(s): Chris Jors and Shane Hevel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): broad swale

Local relief (concave, convex, none): linear, concave

Slope (%): 6-12%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Hochheim loam (HmC2)

NWI classification: F0Kf

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** No (If no, explain in Remarks)

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? **Yes** No

(If, needed, explain any answers in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic?

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

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
---	--

Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (minimum of two required)

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

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) |
| <input type="checkbox"/> Water marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

- | | |
|--|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) | <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) | <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> FAC-Neutral Test (D5) | |

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. While the site is in the FEMA-mapped one-percent-annual-probability floodplain, geomorphic position (D2) is not checked due to the presence of a drain tile system. Drain tiles were recently improved in this area (Exhibit 14). Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined. Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. <u>Medicago lupulina</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Acer negundo</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>	
3. <u>Ambrosia trifida</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>	
4. <u>Poa annua</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>	
5. <u>Chenopodium album</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>	
6. <u>Veronica peregrina</u>	<u>1</u>	<input type="checkbox"/>	<u>FAC</u>	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>24</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/1	97	10YR 5/6	3	C	PL M	Silt loam	
6-20	10YR 3/1	85	10YR 5/6	15	C	PL M	Silt loam	
20-30	2.5Y 4/2	85	10YR 5/8	15	C	M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-15-2019

Applicant/Owner: _____

State: WI

Sampling Point: 70

Investigator(s): Chris Jors and Shane Hevel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): depression

Local relief (concave, convex, none): concave

Slope (%): 6-12%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Hochheim loam (HmC2)

NWI classification: F0Kf

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** No (If no, explain in Remarks)

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? **Yes** No

(If, needed, explain any answers in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? **Yes** No

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

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 8</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input checked="" type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
--	--

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>23</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>9</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. While the site is in the FEMA-mapped one-percent-annual-probability floodplain, geomorphic position (D2) is not checked due to the presence of a recently improved drain tile system (Exhibit 14). Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <u>Total % Cover of:</u> <u>Multiply by:</u> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Acer negundo</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>FAC</u>		
2. <u>Ranunculus sceleratus</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>OBL</u>		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>4</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 3/1	85	7.5YR 3/4	5	C	PL M	Silt loam	
			10YR 4/2	10	D	PL M		
14-22	10YR 2/1	90	7.5YR 3/4	10	C	PL M	Silty clay loam	
22-27	5Y 4/1	80	5YR 4/6	20	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-15-2019
 Applicant/Owner: _____ State: WI Sampling Point: 71
 Investigator(s): Chris Jors and Shane Hevel: SEWRPC Section, Township, Range: SE Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 9</u>
Remarks: (Explain alternative procedures here or in a separate report.) <u>90-day antecedent precipitation is normal.</u>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>22</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <u>Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).</u>			
Remarks: <u>The sample site is just inside the FEMA-mapped one-percent-annual-probability floodplain, but geomorphic position (D2) is not checked due to the presence of a recently improved drain tile system (Exhibit 14). Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.</u>			

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Veronica peregrina</u>	<u>35</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Poa annua</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>40</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 3/2	93	10YR 3/4	7	C	PL M	Silty clay loam	
12-14	10YR 3/1	97	10YR 4/4	3	C	PL M	Clay loam	
14-24	2.5Y 5/2	85	10YR 5/6	15	C	PL M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- | | | | |
|---|--|--|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) | <input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input checked="" type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | <input type="checkbox"/> Red Parent Material (F21) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | | |

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-15-2019

Applicant/Owner: _____

State: WI

Sampling Point: 72

Investigator(s): Chris Jors and Shane Hevel: SEWRPC

Section, Township, Range: SE Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): slight hillslope

Local relief (concave, convex, none): convex

Slope (%): 0-2%

Subregion (LRR or MLRA): LRR K

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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site is situated on a small rise at the edge of an agricultural field/woodland.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. <u>Rubus occidentalis</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>NI (UPL)</u>		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>20</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Veronica peregrina</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Alliaria petiolata</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
3. <u>Sonchus arvensis</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
4. <u>Erigeron canadensis</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>		
5. <u>Rubus occidentalis</u>	<u>3</u>	<input type="checkbox"/>	<u>NI (UPL)</u>		
6. <u>Poa annua</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>43</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Edge of agricultural field (in corn last year).					

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18	10YR 3/1	100					Silt loam	
18-24	10YR 4/1	98	10YR 5/6	2	C	PL M	Silty clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) **(LRR R, MLRA 149B)**

- Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- Loamy Mucky Mineral (F1) **(LRR K, L)**
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- Coast Prairie Redox (A16) **(LLR K, L, R)**
- 5 cm Mucky Peat or Peat (S3) **(LLR K, L, R)**
- Dark Surface (S7) **(LRR K, L)**
- Polyvalue Below Surface (S8) **(LRR K, L)**
- Thin Dark Surface (S9) **(LRR K, L)**
- Iron-Manganese Masses (F12) **(LRR K, L, R)**
- Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-15-2019

Applicant/Owner: _____

State: WI

Sampling Point: 73

Investigator(s): Chris Jors and Shane Hevel: SEWRPC

Section, Township, Range: NW Quarter, Section 28, T8N-R19E

Landform (hillslope, terrace, etc.): low/riparian terrace

Local relief (concave, convex, none): slightly concave

Slope (%): 0-2%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Pella silt loam (Ph)

NWI classification: T3K

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** No (If no, explain in Remarks)

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? **Yes** No

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

(If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 15</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>21</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: A large drain tile outfall was observed upstream of the sample site.

	Absolute % Cover	Dominant Species?	Indicator Status
<u>Tree Stratum</u> (Plot size: 30' radius)			
1. <u>Acer negundo</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>50</u>	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	
<u>Herb Stratum</u> (Plot size: 5' radius)			
1. <u>Impatiens capensis</u>	<u>65</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Sanicula odorata</u>	<u>20</u>	<input type="checkbox"/>	<u>FAC</u>
3. <u>Alliaria petiolata</u>	<u>15</u>	<input type="checkbox"/>	<u>FACU</u>
4. <u>Ranunculus hispidus</u>	<u>15</u>	<input type="checkbox"/>	<u>FAC</u>
5. <u>Circaea canadensis</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>
6. <u>Fraxinus pennsylvanica</u>	<u>2</u>	<input type="checkbox"/>	<u>FACW</u>
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>122</u>	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: 30' radius)			
1. <u>Vitis riparia</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>10</u>	= 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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Hardwood swamp.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 2/1	100					Silt	fluvial deposition
5-14	10YR 2/1	60	10YR 4/6	20	C	PL M	Silty clay loam	
	10YR 4/2	20						
14-24	2.5Y 3/1	80	10YR 3/6	20	C	PL M	Clay loam	
24-30	5Y 4/2	80	7.5YR 4/6	20	C	M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-15-2019
 Applicant/Owner: _____ State: WI Sampling Point: 74
 Investigator(s): Chris Jors and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope (dredge spoil pile) Local relief (concave, convex, none): convex Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
--	--

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
--	---

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

Remarks: The sample site is in the FEMA-mapped floodplain, and perhaps on the floodway boundary. However, it lies on a convex dredge spoil pile above the surrounding terrain. Therefore, no wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status
<u>Tree Stratum</u> (Plot size: 30' radius)			
1. <u>Acer negundo</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>50</u>	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)			
1. <u>Rhamnus cathartica</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>40</u>	= Total Cover	
<u>Herb Stratum</u> (Plot size: 5' radius)			
1. <u>Alliaria petiolata</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
2. <u>Hydrophyllum virginiana</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. <u>Rhamnus cathartica</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
4. <u>Sanicula odorata</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
5. <u>Circaea canadensis</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>
6. <u>Impatiens capensis</u>	<u>10</u>	<input type="checkbox"/>	<u>FACW</u>
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>80</u>	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: 30' radius)			
1. <u>Vitis riparia</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>10</u>	= 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 86% (A/B)

Prevalence Index worksheet:

<u>Total % Cover of:</u>		<u>Multiply by:</u>	
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:

- Rapid Test for Hydrophytic Vegetation
- Dominance Test is >50%**
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present?

Yes No

Remarks: (include photo number here or on a separate sheet.) Hardwoods.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	2.5Y 3/2	85					Silt loam	dredge spoil
	2.5Y 5/3	10						
	10YR 4/4	5						
10-16	2.5Y 5/2	40	10YR 5/6	20	C	M	Silty clay loam	dredge spoil
	2.5Y 3/1	40						
16-28	10YR 2/1	82	10YR 4/6	3	C	M	Silty clay loam	dredge spoil
	2.5Y 5/2	15						

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-15-2019

Applicant/Owner: _____

State: WI

Sampling Point: 75

Investigator(s): Chris Jors and Shane Hevel: SEWRPC

Section, Township, Range: SE Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): slight hillslope

Local relief (concave, convex, none): linear

Slope (%): 6-12%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Hochheim loam (HmC2)

NWI classification: F0Kf

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** No (If no, explain in Remarks)

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? **Yes** No

(If, needed, explain any answers in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? **Yes** No

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

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (minimum of two required)

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

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Aquatic Fauna (B13) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Marl Deposits (B15) |
| <input type="checkbox"/> Water marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | |

- | |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Moss Trim Lines (B16) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input checked="" type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Microtopographic Relief (D4) |
| <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? **Yes** No Depth (inches): 26
 Saturation Present? **Yes** No Depth (inches): 24
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (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 the unnamed tributary to Spring Creek. However, as a recently improved drain tile system is present and the sample site is not in a concave position, geomorphic position (D2) does not apply. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined. Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30'</u> radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	
Herb Stratum (Plot size: <u>5'</u> radius)			
1. Acer negundo	<u>2</u>	<input checked="" type="checkbox"/>	FAC
2. Veronica peregrina	<u>2</u>	<input checked="" type="checkbox"/>	FAC
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>4</u>	= Total Cover	
Woody Vine Stratum (Plot size: <u>30'</u> radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= 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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	2.5Y 2.5/1	100					Silt loam	
3-8	2.5Y 2.5/1	100					Clay loam	
8-13	2.5Y 2.5/1	95	10YR 5/4	5	C	PL M	Clay loam	
13-16	2.5Y 3/1	85	2.5Y 7/6	10	C	PL M	Clay loam	with dolomite
			10YR 4/6	5	C	PL M	Clay loam	
16-19	2.5Y 4/1	90	10YR 4/6	10	C	PL M	Clay loam	
19-28	5Y 5/2	75	7.5YR 5/6	22	C	PL M	Clay loam	
			10GY 5/1	3	D	M		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-15-2019
 Applicant/Owner: _____ State: WI Sampling Point: 76
 Investigator(s): Chris Jors and Shane Heyel: SEWRPC Section, Township, Range: SE Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 9</u>
Remarks: (Explain alternative procedures here or in a separate report.) <u>90-day antecedent precipitation is normal.</u>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>27</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: The sample site is on a toeslope in the FEMA-mapped floodplain, but geomorphic position (D2) is not checked due to a drain tile system, which has been recently improved. Numerous crayfish burrows were present. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <u>Total % Cover of:</u> <u>Multiply by:</u> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Veronica peregrina</u>	<u>3</u>	<input checked="" type="checkbox"/>	FAC		
2. <u>Acer negundo</u>	<u>1</u>	<input checked="" type="checkbox"/>	FAC		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>4</u>	= Total Cover		Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.					

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/1	100					Silt loam	
4-11	10YR 3/1	97	10YR 4/6	3	C	PL M	Clay loam	
11-28	5Y 5/2	85	10YR 5/6	10	C	PL M	Clay loam	
			5GY 5/1	5	D	M		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-15-2019

Applicant/Owner: _____

State: WI

Sampling Point: 77

Investigator(s): Chris Jors and Shane Hevel: SEWRPC

Section, Township, Range: SE Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): broad swale

Local relief (concave, convex, none): linear, concave

Slope (%): 0-2%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Pella silt loam (Ph)

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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (minimum of two required)

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

- | | |
|--|---|
| <input type="checkbox"/> Surface Water (A1)
<input type="checkbox"/> High Water Table (A2)
<input type="checkbox"/> Saturation (A3)
<input type="checkbox"/> Water marks (B1)
<input type="checkbox"/> Sediment Deposits (B2)
<input type="checkbox"/> Drift Deposits (B3)
<input type="checkbox"/> Algal Mat or Crust (B4)
<input type="checkbox"/> Iron Deposits (B5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | <input type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Marl Deposits (B15)
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Other (Explain in Remarks) |
|--|---|

- | | |
|---|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Crayfish Burrows (C8) | <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> FAC-Neutral Test (D5) |
|---|--|

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): 24
 Saturation Present? Yes No Depth (inches): 21
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 9 out of 10 (90%) images taken with normal antecedent precipitation. The site is in a broad swale within the FEMA-mapped floodplain. However, geomorphic position (D2) is not checked due to the presence of a drain tile system, which has been recently improved in this area. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined. Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <u>Total % Cover of:</u> <u>Multiply by:</u> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
Herb Stratum (Plot size: <u>5'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks: (include photo number here or on a separate sheet.) Agricultural field with no live vegetation, only corn stubble from the previous year's crop.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	10YR 3/1	97	10YR 4/6	3	C	PL M	Silty clay loam	
15-26	2.5Y 3/1	95	10YR 4/6	5	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-15-2019
 Applicant/Owner: _____ State: WI Sampling Point: 78
 Investigator(s): Chris Jors and Shane Hevel: SEWRPC Section, Township, Range: SE Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): broad swale Local relief (concave, convex, none): linear, concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site is just outside the delineated wetland boundary.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface) to 6 and at 25</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 9 out of 10 (90%) images taken with normal antecedent precipitation. The site is in a broad swale within the FEMA-mapped floodplain. However, geomorphic position (D2) is not checked due to the presence of a drain tile system, which has been recently improved in this area. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined. Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status																	
<u>Tree Stratum</u> (Plot size: 30' radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>1</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <p style="text-align: center;"><u>0</u> = Total Cover</p> <table style="width:100%; border: none;"> <tr> <td style="text-align: right;"><u>Total % Cover of:</u></td> <td style="text-align: right;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input checked="" type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p><small>¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</small></p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	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 = _____	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
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 = _____																				
1. _____	_____	<input type="checkbox"/>	_____																	
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)																				
1. _____	_____	<input type="checkbox"/>	_____																	
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
<u>Herb Stratum</u> (Plot size: 5' radius)																				
1. <u>Veronica peregrina</u>	<u>1</u>	<input checked="" type="checkbox"/>	FAC																	
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
8. _____	_____	<input type="checkbox"/>	_____																	
9. _____	_____	<input type="checkbox"/>	_____																	
10. _____	_____	<input type="checkbox"/>	_____																	
11. _____	_____	<input type="checkbox"/>	_____																	
12. _____	_____	<input type="checkbox"/>	_____																	
	<u>1</u>	= Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)																				
1. _____	_____	<input type="checkbox"/>	_____																	
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
Remarks: (include photo number here or on a separate sheet.) Agricultural field.																				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-19	2.5Y 2.5/1	95	10YR 3/6	5	C	PL M	Silty clay loam	
19-28	2.5Y 3/1	97	10YR 3/6	6	C	PL M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-15-2019

Applicant/Owner: _____

State: WI

Sampling Point: 79

Investigator(s): Chris Jors and Shane Hevel: SEWRPC

Section, Township, Range: SE Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): depression

Local relief (concave, convex, none): concave

Slope (%): 0-2%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Pella silt loam (Ph)

NWI classification: FOKf

Are climatic/hydrologic conditions on the site typical for this time of year?

Yes No (If no, explain in Remarks)

Are Vegetation X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 7</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site has significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 9 out of 10 (90%) images taken with normal antecedent precipitation. The site is in a depression within the FEMA-mapped floodplain. However, geomorphic position (D2) is not checked due to the presence of a drain tile system, which has been recently improved in this area. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>0</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) The sample site is in an agricultural field with only last season's corn (Zea mays) stubble present. It exhibits wetland hydrology indicators and has a hydric soil. Therefore, the site was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	97	7.5YR 3/4	3	C	PL M	Silty clay loam	
8-18	10YR 3/1	95	10YR 4/6	5	C	PL M	Clay loam	
18-24	2.5Y 3/1	95	2.5Y 5/2	5	D	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-16-2019
 Applicant/Owner: _____ State: WI Sampling Point: 80
 Investigator(s): Chris Jors, Dan Carter, and Shane Hevel: SEWRPC Section, Township, Range: SE Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) NWI classification: E1K/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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 6</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>21</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: Oxidized rhizospheres starting at 3 inches below the surface. NAIP/FSA image review found the sample site area exhibited wetness signatures on 9 out of 10 (90%) images taken with normal antecedent precipitation. The site is in a depression, but geomorphic position (D2) is not checked due to the presence of a drain tile system, which has been recently improved in this area. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Persicaria pensylvanica</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Typha angustifolia</u>	<u>5</u>	<input type="checkbox"/>	<u>OBL</u>	
3. <u>Ambrosia trifida</u>	<u>4</u>	<input type="checkbox"/>	<u>FAC</u>	
4. <u>Ranunculus sceleratus</u>	<u>4</u>	<input type="checkbox"/>	<u>OBL</u>	
5. <u>Polygonum aviculare</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>54</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland/fresh (wet) meadow.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-17	2.5Y 3/1	90	10YR 3/6	10	C	PL M	Silty clay loam	
17-19	2.5Y 3/2	97	10YR 3/6	3	C	M	Clay loam	
19-24	10YR 4/1	98	10YR 3/6	2	C	M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-16-2019
 Applicant/Owner: _____ State: WI Sampling Point: 81
 Investigator(s): Chris Jors, Dan Carter, and Shane Hevel: SEWRPC Section, Township, Range: SE Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 1-6%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Ritchey silt loam (RkB) NWI classification: *E1K/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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. *The sample site is on the WWI-mapped wetland boundary and was found to be just outside the delineated boundary.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures on 9 out of 10 (90%) images taken with normal antecedent precipitation. The site is at the upper edge of a depression and WWI-mapped wetland boundary. However, geomorphic position (D2) is not checked due to the presence of a recently repaired/improved drain tile system. One secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Ambrosia trifida</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Bidens vulgata</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>4</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Remarks: (include photo number here or on a separate sheet.) Agricultural field.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	2.5Y 3/1	100					Silty clay loam	
14-17	2.5Y 3/1	95	10YR 3/4	5	C	PL M	Clay loam	
17-24	5Y 5/1	90	10YR 4/6	10	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-16-2019
 Applicant/Owner: _____ State: WI Sampling Point: 82
 Investigator(s): Chris Jors, Dan Carter, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): depression (excavated pond) Local relief (concave, convex, none): concave Slope (%): N/A
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Water (W) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 11</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site has significantly disturbed vegetation due to being in a constructed and managed pond.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>12</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>0</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)</p>
				<p>Prevalence Index worksheet:</p> <p style="text-align:center;"><u>Total % Cover of:</u> <u>Multiply by:</u></p> <p>OBL species _____ x 1 = _____</p> <p>FACW species _____ x 2 = _____</p> <p>FAC species _____ x 3 = _____</p> <p>FACU species _____ x 4 = _____</p> <p>UPL species _____ x 5 = _____</p> <p>Column Totals: _____ (A) _____ (B)</p> <p style="text-align:center;">Prevalence Index = B/A = _____</p>
				<p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</p>
				<p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p>
				<p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>Remarks: (include photo number here or on a separate sheet.) The sample site is in unvegetated water of a constructed pond. The pond water and banks are managed to control/prohibit vegetation. The site exhibits indicators of wetland hydrology and has a hydric soil due to inundation. Thus the site is wetland with significantly disturbed hydrophytic vegetation. Open water.</p>				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators: <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) <input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R) <input type="checkbox"/> Dark Surface (S7) (LRR K, L) <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) <input type="checkbox"/> Red Parent Material (F21) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input checked="" type="checkbox"/> Other (Explain in Remarks)
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³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks: Soils are inundated with 12 inches of water at the sample point, making it hydric by definition per Criteria 3.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-16-2019
 Applicant/Owner: _____ State: WI Sampling Point: 83
 Investigator(s): Chris Jors, Dan Carter, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): berm (dredge spoils) Local relief (concave, convex, none): convex Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site contains significant dredge spoil material associated with construction of the adjacent pond which occurred in the 1970s.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>19</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Poa pratensis</u>	<u>55</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Trifolium repens</u>	<u>15</u>	<input type="checkbox"/>	<u>FACU</u>	
3. <u>Elymus repens</u>	<u>12</u>	<input type="checkbox"/>	<u>FACU</u>	
4. <u>Taraxacum officinale</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>	
5. <u>Medicago lupulina</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>	
6. <u>Plantago major</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>	
7. <u>Veronica arvensis</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>	
8. <u>Veronica peregrina</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>100</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Prevalence Index worksheet:

<u>Total % Cover of:</u>	<u>Multiply by:</u>
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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Mowed lawn.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					Silt loam	Topsoil spread here for turf
4-24	10YR 4/2	50					Very fine sandy loam	Dredge spoil
	10YR 5/6	50						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LLR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
 - Dark Surface (S7) (LRR K, L)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators 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 second layer in this soil profile contains alternating layers of each color of very fine sandy loam of 0.5 to 1 inch in thickness. No hydric soil indicators were observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-16-2019
 Applicant/Owner: _____ State: WI Sampling Point: 84
 Investigator(s): Chris Jors, Dan Carter, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 10</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>21</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 10 out of 10 (100%) images taken with normal antecedent precipitation. Inundation was observed in the cropped field near the sample site. Geomorphic position, indicator D2, is not checked due to the presence of a drain tile system, which has recently been upgraded (Exhibit 14)..

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Veronica peregrina</u>	1	<input checked="" type="checkbox"/>	FAC	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	1	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= 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: 1000% (A/B)

Prevalence Index worksheet:

<u>Total % Cover of:</u>	<u>Multiply by:</u>
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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					Silt loam	
4-24	N 2.5/	100					Muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- Hydric Soil Indicators:**
- Histosol (A1)**
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)**
 - Coast Prairie Redox (A16) (LLR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
 - Dark Surface (S7) (LRR K, L)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-16-2019

Applicant/Owner: _____

State: WI

Sampling Point: 85

Investigator(s): Chris Jors, Dan Carter, and Shane Hevel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): slight hillslope

Local relief (concave, convex, none): linear

Slope (%): 0-3%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Lamartine silt loam (LmB)

NWI classification: None

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** No (If no, explain in Remarks)

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? **Yes** No

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

(If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 12</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status															
Tree Stratum (Plot size: 30' radius)																		
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)														
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
5. _____	_____	<input type="checkbox"/>	_____															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
<u>0</u>		= Total Cover																
Sapling/Shrub Stratum (Plot size: 30' radius)																		
1. <u>Rhamnus cathartica</u>	<u>7</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:center"><u>Total % Cover of:</u></td> <td style="text-align:center"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> </table> Prevalence Index = B/A = _____	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)
<u>Total % Cover of:</u>	<u>Multiply by:</u>																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____ (A)	_____ (B)																	
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
5. _____	_____	<input type="checkbox"/>	_____															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
<u>7</u>		= Total Cover																
Herb Stratum (Plot size: 5' radius)																		
1. <u>Carex pellita</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Solidago altissima</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
3. <u>Geum aleppicum</u>	<u>10</u>	<input type="checkbox"/>	<u>FAC</u>															
4. <u>Poa pratensis</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>															
5. <u>Taraxacum officinale</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
8. _____	_____	<input type="checkbox"/>	_____															
9. _____	_____	<input type="checkbox"/>	_____															
10. _____	_____	<input type="checkbox"/>	_____															
11. _____	_____	<input type="checkbox"/>	_____															
12. _____	_____	<input type="checkbox"/>	_____															
<u>76</u>		= Total Cover																
Woody Vine Stratum (Plot size: 30' radius)																		
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height														
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
<u>0</u>		= Total Cover																
Remarks: (include photo number here or on a separate sheet.) Degraded sedge meadow.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	N 2.5/	100					Muck	
11-26	2.5Y 4/1	92	2.5Y 4/4	8	C	PL M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- | | | | |
|---|--|---|--|
| Hydric Soil Indicators: | | Indicators for Problematic Hydric Soils³: | |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input checked="" type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) | <input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R) |
| <input checked="" type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) |
| <input checked="" type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | <input type="checkbox"/> Red Parent Material (F21) |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | <input type="checkbox"/> Red Parent Material (F21) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Other (Explain in Remarks) | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | | |

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-16-2019
 Applicant/Owner: _____ State: WI Sampling Point: 86
 Investigator(s): Chris Jors, Dan Carter, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>23</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>15</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. <u>Lonicera x bella</u>	<u>9</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____
2. <u>Rosa multiflora</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>12</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Poa pratensis</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.
2. <u>Solidago altissima</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Daucus carota</u>	<u>15</u>	<input type="checkbox"/>	<u>UPL</u>	
4. <u>Ambrosia trifida</u>	<u>5</u>	<input type="checkbox"/>	<u>FAC</u>	
5. <u>Phalaris arundinacea</u>	<u>5</u>	<input type="checkbox"/>	<u>FACW</u>	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>85</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Remarks: (include photo number here or on a separate sheet.) Old field.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-16-2019
 Applicant/Owner: _____ State: WI Sampling Point: 87
 Investigator(s): Chris Jors, Dan Carter, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): toeslope near drainageway Local relief (concave, convex, none): linear, concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 10</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site is situated on a toeslope above an eroded drainageway. The sample site has significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is adjacent to an eroded drainageway with exposed gravel and cobbles, but geomorphic position, indicator D2, is not checked due the presence of a drain tile system. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status																																	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>3</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><u>Total % Cover of:</u></td> <td style="text-align:right;"><u>Multiply by:</u></td> <td></td> <td></td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>FAC species <u>1</u></td> <td>x 3 =</td> <td><u>3</u></td> <td></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 =</td> <td><u>8</u></td> <td></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> <td></td> </tr> <tr> <td>Column Totals: <u>3</u></td> <td>(A)</td> <td><u>11</u></td> <td>(B)</td> </tr> <tr> <td colspan="4" style="text-align:right;">Prevalence Index = B/A = <u>3.7</u></td> </tr> </table> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<u>Total % Cover of:</u>	<u>Multiply by:</u>			OBL species <u>0</u>	x 1 =	<u>0</u>		FACW species <u>0</u>	x 2 =	<u>0</u>		FAC species <u>1</u>	x 3 =	<u>3</u>		FACU species <u>2</u>	x 4 =	<u>8</u>		UPL species <u>0</u>	x 5 =	<u>0</u>		Column Totals: <u>3</u>	(A)	<u>11</u>	(B)	Prevalence Index = B/A = <u>3.7</u>			
<u>Total % Cover of:</u>	<u>Multiply by:</u>																																			
OBL species <u>0</u>	x 1 =	<u>0</u>																																		
FACW species <u>0</u>	x 2 =	<u>0</u>																																		
FAC species <u>1</u>	x 3 =	<u>3</u>																																		
FACU species <u>2</u>	x 4 =	<u>8</u>																																		
UPL species <u>0</u>	x 5 =	<u>0</u>																																		
Column Totals: <u>3</u>	(A)	<u>11</u>	(B)																																	
Prevalence Index = B/A = <u>3.7</u>																																				
1. _____	_____	<input type="checkbox"/>	_____																																	
2. _____	_____	<input type="checkbox"/>	_____																																	
3. _____	_____	<input type="checkbox"/>	_____																																	
4. _____	_____	<input type="checkbox"/>	_____																																	
5. _____	_____	<input type="checkbox"/>	_____																																	
6. _____	_____	<input type="checkbox"/>	_____																																	
7. _____	_____	<input type="checkbox"/>	_____																																	
	<u>0</u>	= Total Cover																																		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)																																				
1. _____	_____	<input type="checkbox"/>	_____																																	
2. _____	_____	<input type="checkbox"/>	_____																																	
3. _____	_____	<input type="checkbox"/>	_____																																	
4. _____	_____	<input type="checkbox"/>	_____																																	
5. _____	_____	<input type="checkbox"/>	_____																																	
6. _____	_____	<input type="checkbox"/>	_____																																	
7. _____	_____	<input type="checkbox"/>	_____																																	
	<u>0</u>	= Total Cover																																		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)																																				
1. <u>Medicago lupulina</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FACU</u>																																	
2. <u>Taraxacum officinale</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FACU</u>																																	
3. <u>Veronica peregrina</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																																	
4. _____	_____	<input type="checkbox"/>	_____																																	
5. _____	_____	<input type="checkbox"/>	_____																																	
6. _____	_____	<input type="checkbox"/>	_____																																	
7. _____	_____	<input type="checkbox"/>	_____																																	
8. _____	_____	<input type="checkbox"/>	_____																																	
9. _____	_____	<input type="checkbox"/>	_____																																	
10. _____	_____	<input type="checkbox"/>	_____																																	
11. _____	_____	<input type="checkbox"/>	_____																																	
12. _____	_____	<input type="checkbox"/>	_____																																	
	<u>3</u>	= Total Cover																																		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)																																				
1. _____	_____	<input type="checkbox"/>	_____																																	
2. _____	_____	<input type="checkbox"/>	_____																																	
3. _____	_____	<input type="checkbox"/>	_____																																	
4. _____	_____	<input type="checkbox"/>	_____																																	
	<u>0</u>	= Total Cover																																		
Remarks: (include photo number here or on a separate sheet.) The sample site is in a sparsely vegetated agricultural field (prior to planting). It has a hydric soil and meets multiple wetland hydrology indicators and was therefore determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.																																				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	2.5Y 3/2	90	10YR 3/6	10	C	PL M	Silt loam	
6-24	2.5Y 5/3	50	10YR 4/6	30	C	PL M	Very fine sandy loam	with decomposing dolomite
			7.5YR 4/6	10	C	PL M		
			2.5Y 5/2	10	D	PL M		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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: In addition to erosion at the nearby drainageway channel, erosion and loss of topsoil is evident at the sample site.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-16-2019
 Applicant/Owner: _____ State: WI Sampling Point: 88
 Investigator(s): Chris Jors, Dan Carter, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>15</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		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 = _____	
Sapling/Shrub Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: 5' radius)					
1. <u>Medicago lupulina</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
2. <u>Poa pratensis</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
3. <u>Veronica peregrina</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>FAC</u>		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>3</u>	= Total Cover			
Woody Vine Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 2/1						Silty clay loam	
12-18	5Y 4/2	50	7.5YR 3/4	50	C	PL M	Clay loam	
18-21	10YR 5/3	50	10YR 4/6	50	C	PL M	Sandy loam	with dolomite
21+								Refusal: Glacial till/dolomite

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Glacial/till/dolomite
 Depth (inches): 21

Hydric Soil Present? Yes No

Remarks: No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-16-2019
 Applicant/Owner: _____ State: WI Sampling Point: 89
 Investigator(s): Chris Jors, Dan Carter, and Shane Hevel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. <u>Stellaria media</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Veronica peregrina</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. <u>Erigeron canadensis</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>	
4. <u>Chenopodium album</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>	
5. <u>Poa pratensis</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>49</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	10YR 2/1	100					Silt loam	
16-24	2.5Y 4/2	92	10YR 4/6	8	C	PL M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-16-2019
 Applicant/Owner: _____ State: WI Sampling Point: 90
 Investigator(s): Chris Jors, Dan Carter, and Shane Hevel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): broad swale Local relief (concave, convex, none): linear concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 10</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>22</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>11</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in a broad swale, but geomorphic position, indicator D2, is not checked due the presence of a drain tile system.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Veronica peregrina</u>	<u>9</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
2. <u>Poa pratensis</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>10</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 2/1	100					Silt loam	
12-24	5Y 5/1	93	10YR 5/6	7	C	PL M	Silty clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-16-2019
 Applicant/Owner: _____ State: WI Sampling Point: 91
 Investigator(s): Chris Jors, Dan Carter, and Shane Hevel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): broad swale Local relief (concave, convex, none): linear concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 10</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in a broad swale, but geomorphic position, indicator D2, is not checked due the presence of a drain tile system. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status															
<u>Tree Stratum</u> (Plot size: 30' radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>1</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table style="width:100%;"> <tr> <td style="width:60%;"><u>Total % Cover of:</u></td> <td style="width:40%;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> </table> <p style="text-align:center;">Prevalence Index = B/A = _____</p> <hr/> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input checked="" type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is $\leq 3.0^1$</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p><small>¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</small></p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)
<u>Total % Cover of:</u>	<u>Multiply by:</u>																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____ (A)	_____ (B)																	
1. _____	_____	<input type="checkbox"/>	_____															
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
5. _____	_____	<input type="checkbox"/>	_____															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
	<u>0</u>	= Total Cover																
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)																		
1. _____	_____	<input type="checkbox"/>	_____															
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
5. _____	_____	<input type="checkbox"/>	_____															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
	<u>0</u>	= Total Cover																
<u>Herb Stratum</u> (Plot size: 5' radius)																		
1. <u>Veronica peregrina</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>															
2. <u>Chenopodium album</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
5. _____	_____	<input type="checkbox"/>	_____															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
8. _____	_____	<input type="checkbox"/>	_____															
9. _____	_____	<input type="checkbox"/>	_____															
10. _____	_____	<input type="checkbox"/>	_____															
11. _____	_____	<input type="checkbox"/>	_____															
12. _____	_____	<input type="checkbox"/>	_____															
	<u>32</u>	= Total Cover																
<u>Woody Vine Stratum</u> (Plot size: 30' radius)																		
1. _____	_____	<input type="checkbox"/>	_____															
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
	<u>0</u>	= Total Cover																
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.																		

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/1	100					Silt loam	
6-20	10YR 2/1	96	10YR 3/4	4	C	PL M	Silt loam	
20-26	2.5Y 4/1	97	10YR 3/6	3	C	PL M	Clay loam	
26-27	2.5Y 4/2	80	10Y 4/1	12	D	PL M	Clay loam	
			10YR 5/6	8	C	PL M		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-16-2019
 Applicant/Owner: _____ State: WI Sampling Point: 92
 Investigator(s): Chris Jors, Dan Carter, and Shane Hevel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 6-12%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Hochheim loam (HmC2) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

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

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Stellaria media</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Erigeron canadensis</u>	<u>4</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
3. <u>Poa pratensis</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>15</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 2/1	100					Silt loam	
12-18	10YR 2/1	100					Clay loam	
18-24	5Y 5/2	50	10YR 5/8	50	C	PL M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- Hydric Soil Indicators:**
- Histosol (A1)
 - Histic Epipedon (A2)
 - Black Histic (A3)
 - Hydrogen Sulfide (A4)
 - Stratified Layers (A5)
 - Depleted Below Dark Surface (A11)
 - Thick Dark Surface (A12)
 - Sandy Mucky Mineral (S1)
 - Sandy Gleyed Matrix (S4)
 - Sandy Redox (S5)
 - Stripped Matrix (S6)
 - Dark Surface (S7) (LRR R, MLRA 149B)
 - Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
 - Thin Dark Surface (S9) (LRR R, MLRA 149B)
 - Loamy Mucky Mineral (F1) (LRR K, L)
 - Loamy Gleyed Matrix (F2)
 - Depleted Matrix (F3)
 - Redox Dark Surface (F6)
 - Depleted Dark Surface (F7)
 - Redox Depressions (F8)
- Indicators for Problematic Hydric Soils³:**
- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
 - Coast Prairie Redox (A16) (LLR K, L, R)
 - 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
 - Dark Surface (S7) (LRR K, L)
 - Polyvalue Below Surface (S8) (LRR K, L)
 - Thin Dark Surface (S9) (LRR K, L)
 - Iron-Manganese Masses (F12) (LRR K, L, R)
 - Piedmont Floodplain Soils (F19) (MLRA 149B)
 - Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
 - Red Parent Material (F21)
 - Very Shallow Dark Surface (TF12)
 - Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-20-2019

Applicant/Owner: _____

State: WI

Sampling Point: 93

Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): berm (dredge spoils)

Local relief (concave, convex, none): convex

Slope (%): 0-2%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Brookston silt loam (BsA)

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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: The sample site is in the FEMA-mapped floodway, but is on a narrow, slightly elevated berm along the edge of the waterway. The site is on a convex surface between a drain-tiled agricultural field and the naturally vegetated creek bank. Thus, geomorphic position (D2) does not apply. Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Sonchus arvensis</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Urtica dioica</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>		
3. <u>Stachys palustris</u>	<u>12</u>	<input checked="" type="checkbox"/>	<u>OBL</u>		
4. <u>Phalaris arundinacea</u>	<u>10</u>	<input type="checkbox"/>	<u>FACW</u>		
5. <u>Impatiens capensis</u>	<u>8</u>	<input type="checkbox"/>	<u>FACW</u>		
6. <u>Daucus carota</u>	<u>5</u>	<input type="checkbox"/>	<u>UPL</u>		
7. <u>Ambrosia trifida</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>73</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Old field and agricultural field.					

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 2/1	100					Silt loam	
10-22	10YR 2/1	90	10YR 4/2	10	D	M	Silt loam	
22-25	10YR 3/1	92	10YR 5/2	5	D	M	Clay loam	
			10YR 3/4	3	C			

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-20-2019

Applicant/Owner: _____

State: WI

Sampling Point: 94

Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): tributary waterway

Local relief (concave, convex, none): linear, concave

Slope (%): 0-2%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Brookston silt loam (BsA)

NWI classification: F0Kf

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** No (If no, explain in Remarks)

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? **Yes** No

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

(If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 2</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:

Surface Water Present? **Yes** No Depth (inches): 6
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? **Yes** No

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

Remarks: The sample site is in the channel and FEMA-mapped floodway of an unnamed tributary to Spring Creek.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Impatiens capensis</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Phalaris arundinacea</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
<u>25</u> = Total Cover				
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
<u>0</u> = Total Cover				
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) Open water of an unnamed tributary with fresh (wet) meadow along the banks.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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 6 inches of water, hydric by definition - Criteria 3.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 95
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 13</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site has significantly disturbed hydrophytic vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>24</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA images review found the sample site exhibited wetness signatures in 10 out of 10 (100%) images taken with normal antecedent precipitation. The site is in a slight depression within the FEMA-mapped floodway, but geomorphic position (D2) is not checked due to the presence of a recently upgraded drain tile system (Exhibit 14).

	Absolute % Cover	Dominant Species?	Indicator Status																	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)																
1. _____	_____	<input type="checkbox"/>	_____																	
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)																				
1. _____	_____	<input type="checkbox"/>	_____																	
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)																				
1. <u>Ambrosia trifida</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																	
2. <u>Chenopodium album</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACU</u>																	
3. <u>Ranunculus sceleratus</u>	<u>2</u>	<input type="checkbox"/>	<u>OBL</u>																	
4. <u>Veronica peregrina</u>	<u>1</u>	<input type="checkbox"/>	<u>FAC</u>																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
8. _____	_____	<input type="checkbox"/>	_____																	
9. _____	_____	<input type="checkbox"/>	_____																	
10. _____	_____	<input type="checkbox"/>	_____																	
11. _____	_____	<input type="checkbox"/>	_____																	
12. _____	_____	<input type="checkbox"/>	_____																	
	<u>13</u>	= Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)																				
1. _____	_____	<input type="checkbox"/>	_____																	
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><u>Total % Cover of:</u></td> <td style="text-align:right;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species <u>2</u></td> <td>x 1 = <u>2</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>6</u></td> <td>x 3 = <u>18</u></td> </tr> <tr> <td>FACU species <u>5</u></td> <td>x 4 = <u>20</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>13</u></td> <td>(A) <u>40</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>3.08</u></td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species <u>2</u>	x 1 = <u>2</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>6</u>	x 3 = <u>18</u>	FACU species <u>5</u>	x 4 = <u>20</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>13</u>	(A) <u>40</u> (B)	Prevalence Index = B/A = <u>3.08</u>	
				<u>Total % Cover of:</u>	<u>Multiply by:</u>															
OBL species <u>2</u>	x 1 = <u>2</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>6</u>	x 3 = <u>18</u>																			
FACU species <u>5</u>	x 4 = <u>20</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>13</u>	(A) <u>40</u> (B)																			
Prevalence Index = B/A = <u>3.08</u>																				
¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.																				
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height																				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
Remarks: (include photo number here or on a separate sheet.) The sample site is in an active farm field with corn stubble from previous year's crop. It exhibits wetland hydrology indicators, has a hydric soil, and the sparse vegetation nearly meets the prevalence index at 3.08. Therefore, the site was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.																				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-13	10YR 2/1	100					Silt loam	
13-17	2.5Y 3/1	85	2.5Y 5/2	10	D	M	Clay loam	
			5YR 4/4	5	C	PL M		
17-25	5Y 5/2	90	2.5Y 5/6	10	C	PL M	Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 96
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): drainageway Local relief (concave, convex, none): linear, concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 2</u>
Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: The sample site is within the straightened stream channel of an unnamed tributary to Spring Creek. The site is also in the FEMA-mapped floodway, just above the flowing water.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Phalaris arundinacea</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Impatiens capensis</u>	<u>18</u>	<input checked="" type="checkbox"/>	<u>FACW</u>		
3. <u>Ambrosia trifida</u>	<u>10</u>	<input type="checkbox"/>	<u>FAC</u>		
4. <u>Alliaria petiolata</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>51</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Fresh (wet) meadow.					

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-2	10YR 3/1	100					Silt loam	
2-11	2.5Y 2.5/1	95	10YR 3/6	5	C	PL M	Silt loam	
11-18	5Y 4/1	85	7.5YR 4/6	15	C	PL M	Silty clay loam	
18+								Too wet to pull up.

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 97
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): berm Local relief (concave, convex, none): convex Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site is situated on a dredge spoil berm.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed,

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. <u>Lonicera x bella</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>2</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Ambrosia trifida</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Chenopodium album</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
3. <u>Persicaria maculosa</u>	<u>8</u>	<input type="checkbox"/>	<u>FAC</u>		
4. <u>Galium aparine</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>		
5. <u>Parthenocissus inserta</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>52</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					

Remarks: (include photo number here or on a separate sheet.) Agricultural field edge.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 2/1	100					Silt loam	Dredge spoil
7-13	10YR 2/1	70					Silt loam	Dredge spoil with mixing
	2.5Y 4/2	20	10YR 4/6	10	C	PL M		
13-23	10YR 2/1	95	7.5YR 3/4	5	C	PL M	Silt loam	
23-29	10YR 4/2	85	5YR 3/4	15	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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: Top 13 inches of profile appear to be dredge spoil material from ditching in adjacent stream channel. Redox features noted in 7-13 inch layer were only in the 2.5Y 4/2, which was mixed with the 10YR 2/1 soil when dredge spoils were cast aside. Therefore, the Redox Dark Surface (F6) indicator does not apply.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 98
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): low terrace/depression Local relief (concave, convex, none): flat/slightly concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 13</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>22</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in a flat to slightly depressional position in the FEMA-mapped floodway of an unnamed tributary to Spring Creek. However, the geomorphic position (D2) indicator, is not checked due to the presence of a recently upgraded drain tile system. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: 5' radius)					
1. <u>Ambrosia trifida</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Veronica peregrina</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>FAC</u>		
3. <u>Chenopodium album</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>		
4. <u>Impatiens capensis</u>	<u>2</u>	<input type="checkbox"/>	<u>FACW</u>		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>15</u>	= Total Cover			
Woody Vine Stratum (Plot size: 30' radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 2/1	100					Silt loam	
5-12	10YR 2/1	97	10YR 4/6	3	C	PL M	Silt loam	
12-19	N 2.5/	80	7.5YR 3/4	20	C	PL M	Muck	
19-25	10YR 4/2	80	10YR 4/6	8	C	PL M	Clay loam	with shells and decomposing
	10YR 6/2	12						dolomite

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 99
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 13</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site had significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>23.5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in a depression just outside the FEMA-mapped floodway of an unnamed tributary to Spring Creek. However, geomorphic position, indicator D2, is not checked due to the presence of a recently upgraded drain tile system (Exhibit 14). Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status																									
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)																								
1. _____	_____	<input type="checkbox"/>	_____																									
2. _____	_____	<input type="checkbox"/>	_____																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
5. _____	_____	<input type="checkbox"/>	_____																									
6. _____	_____	<input type="checkbox"/>	_____																									
7. _____	_____	<input type="checkbox"/>	_____																									
	<u>0</u>	= Total Cover																										
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)					Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><u>Total % Cover of:</u></td> <td style="text-align:right;"><u>Multiply by:</u></td> <td></td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 =</td> <td><u>0</u></td> </tr> <tr> <td>FAC species <u>8</u></td> <td>x 3 =</td> <td><u>24</u></td> </tr> <tr> <td>FACU species <u>8</u></td> <td>x 4 =</td> <td><u>32</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals: <u>16</u></td> <td>(A)</td> <td><u>56</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align:center;">Prevalence Index = B/A = <u>3.5</u></td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>		OBL species <u>0</u>	x 1 =	<u>0</u>	FACW species <u>0</u>	x 2 =	<u>0</u>	FAC species <u>8</u>	x 3 =	<u>24</u>	FACU species <u>8</u>	x 4 =	<u>32</u>	UPL species <u>0</u>	x 5 =	<u>0</u>	Column Totals: <u>16</u>	(A)	<u>56</u> (B)	Prevalence Index = B/A = <u>3.5</u>	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																											
OBL species <u>0</u>	x 1 =	<u>0</u>																										
FACW species <u>0</u>	x 2 =	<u>0</u>																										
FAC species <u>8</u>	x 3 =	<u>24</u>																										
FACU species <u>8</u>	x 4 =	<u>32</u>																										
UPL species <u>0</u>	x 5 =	<u>0</u>																										
Column Totals: <u>16</u>	(A)	<u>56</u> (B)																										
Prevalence Index = B/A = <u>3.5</u>																												
1. _____	_____	<input type="checkbox"/>	_____																									
2. _____	_____	<input type="checkbox"/>	_____																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
5. _____	_____	<input type="checkbox"/>	_____																									
6. _____	_____	<input type="checkbox"/>	_____																									
7. _____	_____	<input type="checkbox"/>	_____																									
	<u>0</u>	= Total Cover																										
<u>Herb Stratum</u> (Plot size: 5' radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																								
1. <u>Chenopodium album</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FACU</u>																									
2. <u>Veronica peregrina</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																									
3. <u>Ambrosia trifida</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>																									
4. <u>Acer negundo</u>	<u>1</u>	<input type="checkbox"/>	<u>FAC</u>																									
5. _____	_____	<input type="checkbox"/>	_____																									
6. _____	_____	<input type="checkbox"/>	_____																									
7. _____	_____	<input type="checkbox"/>	_____																									
8. _____	_____	<input type="checkbox"/>	_____																									
9. _____	_____	<input type="checkbox"/>	_____																									
10. _____	_____	<input type="checkbox"/>	_____																									
11. _____	_____	<input type="checkbox"/>	_____																									
12. _____	_____	<input type="checkbox"/>	_____																									
	<u>16</u>	= Total Cover																										
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height																								
1. _____	_____	<input type="checkbox"/>	_____																									
2. _____	_____	<input type="checkbox"/>	_____																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
	<u>0</u>	= Total Cover																										
Remarks: (include photo number here or on a separate sheet.) The sample site is in a cropped field which exhibits indicators of wetland hydrology and has hydric soils and is therefore determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																								

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 2/1	100					Silt loam	
5-12	10YR 2/1	96	2.5Y 5/4	4	C	PL M	Silt loam	
12-18	2.5Y 4/1	80	10YR 5/6	8	C	PL M	Clay loam	
	2.5Y 5/2	12						
18-24	5Y 5/2	85	10YR 5/6	15	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 100
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site is on the edge of the cropped field which is the WWI-mapped wetland boundary.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined. No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Chenopodium album</u>	<u>12</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Erigeron annuus</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>	
3. <u>Setaria sp.</u>	<u>2</u>	<input type="checkbox"/>	<u>NI (UPL)</u>	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>16</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= 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:
 Rapid Test for Hydrophytic Vegetation
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:
Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height
Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-8	10YR 2/1	95	10YR 4/6	5	C	M	Silt loam	
8-18	5Y 5/2	50	7.5YR 4/6	25	C	PL M	Clay loam	
			10YR 5/6	25	C	PL M		
18-24	5Y 6/2	80	7.5YR 4/6	20	C	PL M	Clay loam	with dolomite

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 101
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 2-6%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Theresa silt loam (ThB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 14</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18.5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: The sample site is in a pothole depression. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Veronica peregrina</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Acer negundo</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>	
3. <u>Rorripa palustris</u>	<u>1</u>	<input type="checkbox"/>	<u>OBL</u>	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>18</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1	100					Silt loam	
5-19	10YR 3/1	95	10YR 4/3	5	C	PL M	Silt loam	
19-22	2.5Y 4/1	97	7.5YR 3/4	3	C	PL M	Clay loam	with dolomite
22+								Refusal: Dolomite/rocks

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Dolomite/rocks
 Depth (inches): 21

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 102
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status																	
<u>Tree Stratum</u> (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																
1. _____	_____	<input type="checkbox"/>	_____																	
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)					Prevalence Index worksheet: <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>Total % Cover of:</u></td> <td style="text-align: center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	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 = _____
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
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 = _____																				
1. _____	_____	<input type="checkbox"/>	_____																	
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
<u>Herb Stratum</u> (Plot size: 5' radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Veronica peregrina</u>	<u>65</u>	<input checked="" type="checkbox"/>	FAC																	
2. <u>Chenopodium album</u>	<u>3</u>	<input type="checkbox"/>	FACU																	
3. <u>Acer negundo</u>	<u>2</u>	<input type="checkbox"/>	FAC																	
4. <u>Erigeron annuus</u>	<u>2</u>	<input type="checkbox"/>	FACU																	
5. <u>Poa pratensis</u>	<u>2</u>	<input type="checkbox"/>	FACU																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
8. _____	_____	<input type="checkbox"/>	_____																	
9. _____	_____	<input type="checkbox"/>	_____																	
10. _____	_____	<input type="checkbox"/>	_____																	
11. _____	_____	<input type="checkbox"/>	_____																	
12. _____	_____	<input type="checkbox"/>	_____																	
	<u>74</u>	= Total Cover																		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height																
1. _____	_____	<input type="checkbox"/>	_____																	
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
Remarks: (include photo number here or on a separate sheet.) Agricultural field.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/2	100					Silt loam	with small gravel
9-15	10YR 3/1	97	10YR 4/4	3	C	PL M	Silt loam	with small gravel
15-24	10YR 4/1	85	10YR 4/6	15	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 103
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site is on the WWI-mapped wetland boundary.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>21</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface) to 5 and at 14</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined. Only one secondary wetland hydrology indicator observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: 30' radius)				
1. ____	____	<input type="checkbox"/>	____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. ____	____	<input type="checkbox"/>	____	
3. ____	____	<input type="checkbox"/>	____	
4. ____	____	<input type="checkbox"/>	____	
5. ____	____	<input type="checkbox"/>	____	
6. ____	____	<input type="checkbox"/>	____	
7. ____	____	<input type="checkbox"/>	____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)				
1. ____	____	<input type="checkbox"/>	____	Prevalence Index worksheet: <u>Total % Cover of:</u> <u>Multiply by:</u> 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 = ____
2. ____	____	<input type="checkbox"/>	____	
3. ____	____	<input type="checkbox"/>	____	
4. ____	____	<input type="checkbox"/>	____	
5. ____	____	<input type="checkbox"/>	____	
6. ____	____	<input type="checkbox"/>	____	
7. ____	____	<input type="checkbox"/>	____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: 5' radius)				
1. <u>Veronica peregrina</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.
2. <u>Ranunculus sceleratus</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
3. <u>Rorripa palustris</u>	<u>1</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
4. ____	____	<input type="checkbox"/>	____	
5. ____	____	<input type="checkbox"/>	____	
6. ____	____	<input type="checkbox"/>	____	
7. ____	____	<input type="checkbox"/>	____	
8. ____	____	<input type="checkbox"/>	____	
9. ____	____	<input type="checkbox"/>	____	
10. ____	____	<input type="checkbox"/>	____	
11. ____	____	<input type="checkbox"/>	____	
12. ____	____	<input type="checkbox"/>	____	
	<u>4</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: 30' radius)				
1. ____	____	<input type="checkbox"/>	____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
2. ____	____	<input type="checkbox"/>	____	
3. ____	____	<input type="checkbox"/>	____	
4. ____	____	<input type="checkbox"/>	____	
	<u>0</u>	= Total Cover		
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (include photo number here or on a separate sheet.) Agricultural field.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1	100					Silt loam	
5-8	10YR 3/1	96	10YR 4/4	4	C	PL M	Silt loam	
8-14	2.5Y 3/1	90	2.5Y 5/4	10	C	PL M	Clay loam	
14-22	2.5Y 5/2	60	10YR 4/6	15	C	PL M	Clay loam	
	2.5Y 4/1	25						

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 104
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight depression Local relief (concave, convex, none): concave Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 13</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input checked="" type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface) to 4 and at 8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: While the site is in a depression, geomorphic position (D2) is not checked due to the presence of a recently upgraded drain tile system (Exhibit 14). Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status																									
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>2</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><u>Total % Cover of:</u></td> <td style="text-align:right;"><u>Multiply by:</u></td> <td></td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 =</td> <td><u>5</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 =</td> <td><u>0</u></td> </tr> <tr> <td>FAC species <u>3</u></td> <td>x 3 =</td> <td><u>9</u></td> </tr> <tr> <td>FACU species <u>3</u></td> <td>x 4 =</td> <td><u>12</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals: <u>11</u></td> <td>(A)</td> <td><u>26</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align:right;">Prevalence Index = B/A = <u>2.36</u></td> </tr> </table> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input checked="" type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p><small>¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</small></p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<u>Total % Cover of:</u>	<u>Multiply by:</u>		OBL species <u>5</u>	x 1 =	<u>5</u>	FACW species <u>0</u>	x 2 =	<u>0</u>	FAC species <u>3</u>	x 3 =	<u>9</u>	FACU species <u>3</u>	x 4 =	<u>12</u>	UPL species <u>0</u>	x 5 =	<u>0</u>	Column Totals: <u>11</u>	(A)	<u>26</u> (B)	Prevalence Index = B/A = <u>2.36</u>		
<u>Total % Cover of:</u>	<u>Multiply by:</u>																											
OBL species <u>5</u>	x 1 =	<u>5</u>																										
FACW species <u>0</u>	x 2 =	<u>0</u>																										
FAC species <u>3</u>	x 3 =	<u>9</u>																										
FACU species <u>3</u>	x 4 =	<u>12</u>																										
UPL species <u>0</u>	x 5 =	<u>0</u>																										
Column Totals: <u>11</u>	(A)	<u>26</u> (B)																										
Prevalence Index = B/A = <u>2.36</u>																												
1. _____	_____	<input type="checkbox"/>	_____																									
2. _____	_____	<input type="checkbox"/>	_____																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
5. _____	_____	<input type="checkbox"/>	_____																									
6. _____	_____	<input type="checkbox"/>	_____																									
7. _____	_____	<input type="checkbox"/>	_____																									
	<u>0</u>	= Total Cover																										
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)																												
1. _____	_____	<input type="checkbox"/>	_____																									
2. _____	_____	<input type="checkbox"/>	_____																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
5. _____	_____	<input type="checkbox"/>	_____																									
6. _____	_____	<input type="checkbox"/>	_____																									
7. _____	_____	<input type="checkbox"/>	_____																									
	<u>0</u>	= Total Cover																										
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)																												
1. <u>Chenopodium album</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>FACU</u>																									
2. <u>Rorripa palustris</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>OBL</u>																									
3. <u>Ranunculus sceleratus</u>	<u>2</u>	<input type="checkbox"/>	<u>OBL</u>																									
4. <u>Veronica peregrina</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>																									
5. <u>Acer negundo</u>	<u>1</u>	<input type="checkbox"/>	<u>FAC</u>																									
6. _____	_____	<input type="checkbox"/>	_____																									
7. _____	_____	<input type="checkbox"/>	_____																									
8. _____	_____	<input type="checkbox"/>	_____																									
9. _____	_____	<input type="checkbox"/>	_____																									
10. _____	_____	<input type="checkbox"/>	_____																									
11. _____	_____	<input type="checkbox"/>	_____																									
12. _____	_____	<input type="checkbox"/>	_____																									
	<u>11</u>	= Total Cover																										
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)																												
1. _____	_____	<input type="checkbox"/>	_____																									
2. _____	_____	<input type="checkbox"/>	_____																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
	<u>0</u>	= Total Cover																										
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.																												

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-20-2019

Applicant/Owner: _____

State: WI

Sampling Point: 105

Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): tributary waterway

Local relief (concave, convex, none): linear, concave

Slope (%): 0-2%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Pella silt loam (Ph)

NWI classification: T3K

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** No (If no, explain in Remarks)

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? **Yes** No

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

(If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 2</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: The sample site is in the stream channel and FEMA-mapped floodway of an unnamed tributary to Spring Creek.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Impatiens capensis</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.
2. <u>Rosa multiflora</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>	
3. <u>Alliaria petiolata</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>20</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				

Remarks: (include photo number here or on a separate sheet.) Open water of a tributary to Spring Brook.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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 6 inches of water, hydric by definition - Criteria 3.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 106
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): berm (dredge spoils) Local relief (concave, convex, none): linear, convex Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30'</u> radius)																				
1. <u>Acer negundo</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)																
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>10</u>	= Total Cover																		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)																				
1. <u>Rhamnus cathartica</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>	Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><u>Total % Cover of:</u></td> <td style="text-align:left;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = _____</td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	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 = _____	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
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 = _____																				
2. <u>Lonicera x bella</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>4</u>	= Total Cover																		
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Alliaria petiolata</u>	<u>35</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																
2. <u>Phalaris arundinacea</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>																	
3. <u>Impatiens capensis</u>	<u>15</u>	<input type="checkbox"/>	<u>FACW</u>																	
4. <u>Parthenocissus inserta</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>																	
5. <u>Ambrosia trifida</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>																	
6. <u>Cirsium arvense</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>																	
7. _____	_____	<input type="checkbox"/>	_____																	
8. _____	_____	<input type="checkbox"/>	_____																	
9. _____	_____	<input type="checkbox"/>	_____																	
10. _____	_____	<input type="checkbox"/>	_____																	
11. _____	_____	<input type="checkbox"/>	_____																	
12. _____	_____	<input type="checkbox"/>	_____																	
	<u>80</u>	= Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. <u>Vitis riparia</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height																
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
	<u>3</u>	= Total Cover																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
Remarks: (include photo number here or on a separate sheet.) Old field.																				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	2.5Y 2.5/1	100					Silt loam	Dredge spoil
10-15	2.5Y 2.5/1	95	2.5Y 5/4	5	C	PL M	Silt loam	
15-18	2.5Y 4/1	90	10YR 5/6	5	C	PL M	Clay loam	
			7.5YR 3/4	5	C	PL M		
18+								Refusal: Dolomite/cobbles

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)
- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: Dolomite/cobbles
 Depth (inches): 18

Hydric Soil Present? Yes No

Remarks: No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 107
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 15</u>
Remarks: (Explain alternative procedures here or in a separate report.) <u>90-day antecedent precipitation is normal.</u>	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>21</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: <u>Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).</u>	
Remarks: <u>Sample site is in a broad depression within the FEMA-mapped floodplain of an unnamed tributary to Spring Creek.</u>	

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. <u>Acer negundo</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>5</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. <u>Salix interior</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	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 = _____
2. <u>Acer negundo</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>30</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Impatiens capensis</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.
2. <u>Urtica dioica</u>	<u>35</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. <u>Phalaris arundinacea</u>	<u>15</u>	<input type="checkbox"/>	<u>FACW</u>	
4. <u>Alliaria petiolata</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>	
5. <u>Equisetum arvense</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>	
6. <u>Hackelia virginiana</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>	
7. <u>Ambrosia trifida</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>103</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
				Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (include photo number here or on a separate sheet.) Fresh (wet) meadow with scattered lowland shrubs.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-3	5Y 2.5/1	100					Silt loam	
3-12	5Y 2.5/1	97	10YR 4/2	3	D	M	Silt loam	
12-18	10YR 4/1	90	10YR 4/6	10	C	PL M	Clay loam	
18-24	10YR 4/1	85	7.5YR 4/6	15	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 108
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): slightly convex Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 15</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 8 out of 10 (80%) images taken with normal antecedent precipitation. The sample site is on a slightly convex slope just outside the FEMA-mapped floodplain of an unnamed tributary to Spring Creek, and has shallow groundwater/seepage. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

				Dominance Test worksheet:
Tree Stratum (Plot size: 30' radius)				Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)
1. _____	_____	<input type="checkbox"/>	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
2. _____	_____	<input type="checkbox"/>	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
		<u>0</u>	= Total Cover	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 30' radius)				<u>Total % Cover of:</u> _____ <u>Multiply by:</u> _____
1. _____	_____	<input type="checkbox"/>	_____	OBL species _____ x 1 = _____
2. _____	_____	<input type="checkbox"/>	_____	FACW species _____ x 2 = _____
3. _____	_____	<input type="checkbox"/>	_____	FAC species _____ x 3 = _____
4. _____	_____	<input type="checkbox"/>	_____	FACU species _____ x 4 = _____
5. _____	_____	<input type="checkbox"/>	_____	UPL species _____ x 5 = _____
6. _____	_____	<input type="checkbox"/>	_____	Column Totals: _____ (A) _____ (B)
7. _____	_____	<input type="checkbox"/>	_____	Prevalence Index = B/A = _____
		<u>0</u>	= Total Cover	Hydrophytic Vegetation Indicators:
Herb Stratum (Plot size: 5' radius)				<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation
1. <u>Veronica peregrina</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Acer negundo</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. _____	_____	<input type="checkbox"/>	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____	_____	<input type="checkbox"/>	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	<input type="checkbox"/>	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata:
8. _____	_____	<input type="checkbox"/>	_____	Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height
9. _____	_____	<input type="checkbox"/>	_____	Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.
10. _____	_____	<input type="checkbox"/>	_____	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11. _____	_____	<input type="checkbox"/>	_____	Woody vines – All woody vines greater than 3.28 ft in height
12. _____	_____	<input type="checkbox"/>	_____	
		<u>22</u>	= Total Cover	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
		<u>0</u>	= Total Cover	
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	2.5Y 3/1	97	10YR 4/6	3	C	PL M	Silt loam	
10-15	2.5Y 4/2	85	10YR 4/6	15	C	PL M	Clay loam	
15-22	5Y 5/2	90	10YR 4/6	10	C	PL M	Clay loam	with dolomite and gravel

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)**
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 109
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear convex Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>21</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>14</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Veronica peregrina</u>	<u>35</u>	<input checked="" type="checkbox"/>	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Chenopodium album</u>	<u>10</u>	<input checked="" type="checkbox"/>	FACU		
3. <u>Erigeron canadensis</u>	<u>3</u>	<input type="checkbox"/>	FACU		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>48</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-9	10YR 3/2	100					Silt loam	
9-14	10YR 3/2	95	10YR 4/6	5	C	PL M	Silt loam	
14-19	10YR 4/2	50	10YR 4/6	50	C	PL M	Clay loam	
19-25	2.5Y 5/3	90	10YR 4/6	10	C	PL M	Sandy clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 110
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): slight depression/toeslope Local relief (concave, convex, none): concave Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 15</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 8 out of 10 (80%) images taken with normal antecedent precipitation. The sample site is on a depression/toeslope just outside the FEMA-mapped floodplain of an unnamed tributary to Spring Creek. Indicator D2, geomorphic position, is not checked due to the presence of a drain tile system. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Veronica peregrina</u>	<u>55</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>55</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1	100					Silt loam	
5-13	10YR 3/1	85	10YR 4/6	8	C	PL M	Silt loam	
			2.5Y 6/2	7	D	M		
13-18	2.5Y 4/1	85	10YR 4/6	10	C	PL M	Clay loam	
			10YR 5/2	5	D	M		
18-24	2.5Y 4/1	80	5YR 3/3	10	C	PL M	Clay loam	
			10YR 5/2	10	D	M		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 111
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface) to 6, and at 17</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Saturation at the surface was due to recent rain. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined. No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><u>Total % Cover of:</u></td> <td style="text-align:right;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = _____</td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	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 = _____	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
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 = _____																				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	<input type="checkbox"/>	_____																	
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover																		
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Veronica peregrina</u>	<u>30</u>	<input checked="" type="checkbox"/>	FAC	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																
2. <u>Chenopodium album</u>	<u>5</u>	<input type="checkbox"/>	FACU																	
3. <u>Erigeron canadensis</u>	<u>2</u>	<input type="checkbox"/>	FACU																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
8. _____	_____	<input type="checkbox"/>	_____																	
9. _____	_____	<input type="checkbox"/>	_____																	
10. _____	_____	<input type="checkbox"/>	_____																	
11. _____	_____	<input type="checkbox"/>	_____																	
12. _____	_____	<input type="checkbox"/>	_____																	
	<u>37</u>	= Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height																
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/1	100					Silt loam	
6-14	10YR 3/1	80	7.5YR 3/4	10	C	PL M	Silt loam	
			10YR 4/6	10	C	PL M		
14-24	10YR 4/1	80	10YR 5/6	20	C	PL M	Clay loam	with dolomite

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 112
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 15</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site has significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images.

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 8 out of 10 (80%) images taken with normal antecedent precipitation. The sample site is in a depression, but indicator D2, geomorphic position, is not checked due to the presence of a drain tile system. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing and depth of last tillage could not be determined.

	Absolute % Cover	Dominant Species?	Indicator Status																									
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>2</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)</p> <hr/> <p>Prevalence Index worksheet:</p> <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><u>Total % Cover of:</u></td> <td style="text-align:right;"><u>Multiply by:</u></td> <td></td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 =</td> <td><u>0</u></td> </tr> <tr> <td>FAC species <u>2</u></td> <td>x 3 =</td> <td><u>6</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 =</td> <td><u>8</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals: <u>4</u></td> <td>(A)</td> <td><u>14</u> (B)</td> </tr> <tr> <td colspan="3" style="text-align:right;">Prevalence Index = B/A = <u>3.5</u></td> </tr> </table> <p>Hydrophytic Vegetation Indicators:</p> <p><input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p><input type="checkbox"/> Dominance Test is >50%</p> <p><input type="checkbox"/> Prevalence Index is ≤3.0¹</p> <p><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</p> <p><input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</p> <p>¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.</p> <hr/> <p>Definitions of Vegetation Strata:</p> <p>Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height</p> <p>Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.</p> <p>Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.</p> <p>Woody vines – All woody vines greater than 3.28 ft in height</p> <hr/> <p>Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<u>Total % Cover of:</u>	<u>Multiply by:</u>		OBL species <u>0</u>	x 1 =	<u>0</u>	FACW species <u>0</u>	x 2 =	<u>0</u>	FAC species <u>2</u>	x 3 =	<u>6</u>	FACU species <u>2</u>	x 4 =	<u>8</u>	UPL species <u>0</u>	x 5 =	<u>0</u>	Column Totals: <u>4</u>	(A)	<u>14</u> (B)	Prevalence Index = B/A = <u>3.5</u>		
<u>Total % Cover of:</u>	<u>Multiply by:</u>																											
OBL species <u>0</u>	x 1 =	<u>0</u>																										
FACW species <u>0</u>	x 2 =	<u>0</u>																										
FAC species <u>2</u>	x 3 =	<u>6</u>																										
FACU species <u>2</u>	x 4 =	<u>8</u>																										
UPL species <u>0</u>	x 5 =	<u>0</u>																										
Column Totals: <u>4</u>	(A)	<u>14</u> (B)																										
Prevalence Index = B/A = <u>3.5</u>																												
1. _____	_____	<input type="checkbox"/>	_____																									
2. _____	_____	<input type="checkbox"/>	_____																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
5. _____	_____	<input type="checkbox"/>	_____																									
6. _____	_____	<input type="checkbox"/>	_____																									
7. _____	_____	<input type="checkbox"/>	_____																									
	<u>0</u>	= Total Cover																										
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)																												
1. _____	_____	<input type="checkbox"/>	_____																									
2. _____	_____	<input type="checkbox"/>	_____																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
5. _____	_____	<input type="checkbox"/>	_____																									
6. _____	_____	<input type="checkbox"/>	_____																									
7. _____	_____	<input type="checkbox"/>	_____																									
	<u>0</u>	= Total Cover																										
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)																												
1. <u>Chenopodium album</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACU</u>																									
2. <u>Veronica peregrina</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
5. _____	_____	<input type="checkbox"/>	_____																									
6. _____	_____	<input type="checkbox"/>	_____																									
7. _____	_____	<input type="checkbox"/>	_____																									
8. _____	_____	<input type="checkbox"/>	_____																									
9. _____	_____	<input type="checkbox"/>	_____																									
10. _____	_____	<input type="checkbox"/>	_____																									
11. _____	_____	<input type="checkbox"/>	_____																									
12. _____	_____	<input type="checkbox"/>	_____																									
	<u>4</u>	= Total Cover																										
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)																												
1. _____	_____	<input type="checkbox"/>	_____																									
2. _____	_____	<input type="checkbox"/>	_____																									
3. _____	_____	<input type="checkbox"/>	_____																									
4. _____	_____	<input type="checkbox"/>	_____																									
	<u>0</u>	= Total Cover																										
Remarks: (include photo number here or on a separate sheet.) The sample site is in a depression in an agricultural field. It exhibits multiple wetland hydrology indicators and has hydric soil. Thus, the site is wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.																												

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/1	100					Silt loam	
6-9	10YR 2/1	97	2.5Y 5/4	3	C	PL M	Silt loam	
9-18	10YR 3/1	95	10YR 3/4	5	C	PL M	Silt loam	
18-24	2.5Y 5/2	88	10YR 5/6	12	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 113
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface) to 6, and at 13</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Saturation at the surface was due to recent rain. No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u>		= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
<u>0</u>		= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Erigeron canadensis</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Veronica peregrina</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. <u>Glycine max</u> (sprouts from previous crop)	<u>2</u>	<input type="checkbox"/>	<u>NI (UPL)</u>	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
<u>27</u>		= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
<u>0</u>		= Total Cover		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) Agricultural field.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/1	100					Silt loam	
6-13	10YR 3/1	100					Silty clay loam	
13-24	2.5Y 5/2	85	10YR 4/6	15	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 114
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): slight rise Local relief (concave, convex, none): convex Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Veronica peregrina</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
2. <u>Sphenopholis intermedia</u>	<u>10</u>	<input type="checkbox"/>	<u>FAC</u>		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>70</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Agricultural field.					

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 3/1	100					Silt loam	
10-14	10YR 3/1	90	10YR 4/4	10	C	PL M	Silt loam	
14-22	N 2.5/	100					Muck	
22-25	2.5Y 3/1	100					Clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

Polyvalue Below Surface (S8) (LRR R, MLRA 149B)

Thin Dark Surface (S9) (LRR R, MLRA 149B)

Loamy Mucky Mineral (F1) (LRR K, L)

Loamy Gleyed Matrix (F2)

Depleted Matrix (F3)

Redox Dark Surface (F6)

Depleted Dark Surface (F7)

Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-20-2019
 Applicant/Owner: _____ State: WI Sampling Point: 115
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): broad swale/depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 10</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>24</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images.

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is a broad swale/depression, but the geomorphic position indicator (D2) is not checked due to the presence of a drain tile system.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Veronica peregrina</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>60</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-16	2.5Y 2.5/1	100					Muck	
16-23	2.5Y 3/1	97	10YR 3/4	3	C	PL M	Clay loam	
23-25	2.5Y 5/1	95	2.5Y 5/4	5	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

Indicators for Problematic Hydric Soils³:

- Histosol (A1)**
- Histic Epipedon (A2)**
- Black Histic (A3)**
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)**
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 116
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface) to 5, and at 15</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Saturation at the surface due to recent rain. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing of last tillage was unknown. No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Veronica peregrina</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Medicago sativa</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Chenopodium album</u>	<u>4</u>	<input type="checkbox"/>	<u>FACU</u>	
4. <u>Hordeum jubatum</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>	
5. <u>Acer negundo</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>	
6. <u>Poa annua</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>23</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= 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:
 Rapid Test for Hydrophytic Vegetation
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1	100					Silt loam	
5-11	10YR 3/2	85	7.5YR 3/4	15	C	PL M	Silt loam	
11-17	10YR 5/2	80	7.5YR 3/4	20	C	PL M	Silty clay loam	
17-24	N 2.5/	100					Muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)			
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)			
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)			
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)			

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 117
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): slightly concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 10</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site has significantly disturbed vegetation due to farming.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>24</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Sample site is on a slightly concave toeslope, but geomorphic position, indicator D2, is not checked due to the presence of a drain tile system. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing of last tillage was unknown.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Medicago sativa</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Acer negundo</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. <u>Chenopodium album</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>	
4. <u>Veronica peregrina</u>	<u>5</u>	<input type="checkbox"/>	<u>FAC</u>	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>28</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)				Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>13</u> x 3 = <u>39</u> FACU species <u>15</u> x 4 = <u>60</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>28</u> (A) <u>99</u> (B) Prevalence Index = B/A = <u>3.5</u>
				¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) The sample site is in a slightly concave position at the toe of a large hill just inside an agricultural field. It exhibits wetland hydrology and hydric soil indicators and therefore is determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (farmed) wetland.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1	90	10YR 3/4	10	C	PL M	Silt loam	
5-11	2.5Y 3/2	85	7.5YR 3/4	15	C	PL M	Silty clay loam	
11-19	N 2.5/	100					Muck	
19-29	N 2.5/	92	2.5Y 4/4	5	C	PL M	Clay loam	
			7.5YR 3/4	3	C	PL M		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 118
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): convex Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>19.5</u> Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (surface) to 4, and at 18</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Saturation at the surface is due to recent rain. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing of last tillage was unknown. No wetland hydrology indicators observed.

<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	

<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	

<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1. <u>Veronica peregrina</u>	<u>15</u>	<input checked="" type="checkbox"/>	FAC
2. <u>Acer negundo</u>	<u>1</u>	<input type="checkbox"/>	FAC
3. <u>Poa annua</u>	<u>1</u>	<input type="checkbox"/>	FACU
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>17</u>	= Total Cover	

<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= 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:

<u>Total % Cover of:</u>	<u>Multiply by:</u>
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:

- Rapid Test for Hydrophytic Vegetation
- Dominance Test is >50%**
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Agricultural field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 3/1	100					Silt loam	
4-11	10YR 3/1	50	7.5YR 3/4	10	C	PL M	Silty clay loam	
	10YR 4/2	40						
11-18	N 2.5/	10					Muck	
18-20	N 2.5/	100					Clay loam	
20+								Refusal: Rock

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Rock
Depth (inches): 20

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 119
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 10</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>11</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in a concave position on a toeslope, but geomorphic position (D2) is not checked due to the presence of a drain tile system. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing of last tillage was unknown.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B) Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
1. _____	___	<input type="checkbox"/>	___	
2. _____	___	<input type="checkbox"/>	___	
3. _____	___	<input type="checkbox"/>	___	
4. _____	___	<input type="checkbox"/>	___	
5. _____	___	<input type="checkbox"/>	___	
6. _____	___	<input type="checkbox"/>	___	
7. _____	___	<input type="checkbox"/>	___	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	___	<input type="checkbox"/>	___	
2. _____	___	<input type="checkbox"/>	___	
3. _____	___	<input type="checkbox"/>	___	
4. _____	___	<input type="checkbox"/>	___	
5. _____	___	<input type="checkbox"/>	___	
6. _____	___	<input type="checkbox"/>	___	
7. _____	___	<input type="checkbox"/>	___	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Veronica peregrina</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Poa pratensis</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>	
3. _____	___	<input type="checkbox"/>	___	
4. _____	___	<input type="checkbox"/>	___	
5. _____	___	<input type="checkbox"/>	___	
6. _____	___	<input type="checkbox"/>	___	
7. _____	___	<input type="checkbox"/>	___	
8. _____	___	<input type="checkbox"/>	___	
9. _____	___	<input type="checkbox"/>	___	
10. _____	___	<input type="checkbox"/>	___	
11. _____	___	<input type="checkbox"/>	___	
12. _____	___	<input type="checkbox"/>	___	
	<u>21</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	___	<input type="checkbox"/>	___	
2. _____	___	<input type="checkbox"/>	___	
3. _____	___	<input type="checkbox"/>	___	
4. _____	___	<input type="checkbox"/>	___	
	<u>0</u>	= Total Cover		

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 3/1	100					Silt loam	
5-11	10YR 3/1	90	7.5YR 3/4	10	C	PL M	Silty clay loam	
11-13	10YR 4/2	85	10YR 4/6	15	C	PL M	Silty clay loam	
13-20	N 2.5/	100					Muck	
20-24	N 2.5/	100					Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 120
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): small hill (within larger depression) Local relief (concave, convex, none): convex Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 10</u>
Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. Sample site is "high point" within larger wetland.	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).	
Remarks: Saturation (A3) indicator does not apply since a water table was not observed, and the water table requirement could not be waived since bedrock was not encountered within 12 inches of the surface. NAIP/FSA image review found the sample site area exhibited wetness signatures in 10 out of 10 (100%) images taken with normal antecedent precipitation. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing of last tillage was unknown.	

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Veronica peregrina</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.
2. <u>Ranunculus sceleratus</u>	<u>6</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
3. <u>Chenopodium album</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>29</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	N 2.5/	100					Silt loam	
4-9	N 2.5/	85	10YR 4/6	10	C	PL M	Silt loam	
			10YR 5/2	5	D	M		
9-18	5Y 5/2	75	10YR 5/6	25	C	PL M	Clay loam	with gravel
18+								Refusal: Bedrock

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Bedrock
Depth (inches): 18

Hydric Soil Present? Yes No

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 121
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope (steep road embankment) Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
0 = Total Cover			
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
0 = Total Cover			
Herb Stratum (Plot size: 5' radius)			
1. <u>Phalaris arundinacea</u>	30	<input checked="" type="checkbox"/>	FACW
2. <u>Taraxacum officinale</u>	25	<input checked="" type="checkbox"/>	FACU
3. <u>Schedonorus arundinaceus</u>	20	<input checked="" type="checkbox"/>	FACU
4. <u>Alliaria petiolata</u>	10	<input type="checkbox"/>	FACU
5. <u>Ambrosia artemisiifolia</u>	2	<input type="checkbox"/>	FACU
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
87 = Total Cover			
Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
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:
 Rapid Test for Hydrophytic Vegetation
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:
Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height
Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Old field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	10YR 2/2	100					Silt loam	with grit and gravel fill
15+								Refusal: Gravel fill

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel fill
Depth (inches): 15

Hydric Soil Present? Yes No

Remarks: No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 122
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 10</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>26</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images (Exhibit 12).

Remarks: NAIP/FSA image review found that the sample site exhibited wetness signatures on 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in a depression, but geomorphic position (D2) is not checked due to the presence of a drain tile system. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing of last tillage was unknown.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: 30' radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: 5' radius)				
1. <u>Veronica peregrina</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Ambrosia artemisiifolia</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>9</u>	= Total Cover		
Woody Vine Stratum (Plot size: 30' radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤ 3.0 ¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	N 2.5/	100					Loam	
5-10	N 2.5/	90	10YR 4/4	10	C	PL M	Clay loam	
10-27	5Y 5/2	85	10YR 5/8	15	C	PL M	Clay loam	
27+								Refusal: Dolomite

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 123
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope (road embankment) Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Phalaris arundinacea</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Alliaria petiolata</u>	<u>35</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
3. <u>Schedonorus arundinaceus</u>	<u>20</u>	<input type="checkbox"/>	<u>FACU</u>		
4. <u>Cirsium arvense</u>	<u>15</u>	<input type="checkbox"/>	<u>FACU</u>		
5. <u>Sonchus arvensis</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>		
6. <u>Linaria vulgaris</u>	<u>5</u>	<input type="checkbox"/>	<u>NI (UPL)</u>		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>125</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Old field.					

Hydrophytic Vegetation Present? Yes No

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	N 2.5/	100					Sandy clay loam	Fill material
15-19	N 2.5/	95	5YR 3/4	5	C	PL M	Clay loam	Fill material with gravel
19-25	N 2.5/	100					Muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)			
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)			
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)			

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks: No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 124
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 10</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images.

Remarks: NAIP/FSA image review found the sample site area exhibited wetness signatures in 10 out of 10 (100%) images taken with normal antecedent precipitation. The sample site is in a depression, but, geomorphic position, indicator D2, is not checked due to the presence of a drain tile system. Recent Iron Reduction in Tilled Soils (C6) indicator not checked since timing of last tillage was unknown.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. <u>Salix discolor</u>	<u>1</u>	<input type="checkbox"/>	<u>FACW</u>	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>1</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Agrostis gigantea</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Phalaris arundinacea</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3. <u>Scirpus atrovirens</u>	<u>8</u>	<input type="checkbox"/>	<u>OBL</u>	
4. <u>Taraxacum officinale</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>	
5. <u>Cirsium arvense</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>56</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)				
¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.				
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Remarks: (include photo number here or on a separate sheet.) Atypical (farmed) wetland/fresh (wet) meadow.				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-21	N 2.5/	95	7.5YR 3/4	5	C	PL M	Muck	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:		Indicators for Problematic Hydric Soils³:	
<input checked="" type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Red Parent Material (F21)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)			

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 125
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): steep hillslope (modified stream bank) Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Maianthemum racemosum	10	<input checked="" type="checkbox"/>	FACU
2. Taraxacum officinale	5	<input checked="" type="checkbox"/>	FACU
3. <i>Alliaria petiolata</i>	<u>3</u>	<input type="checkbox"/>	FACU
4. <i>Urtica dioica</i>	<u>2</u>	<input type="checkbox"/>	FAC
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>20</u>	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	

Dominance Test worksheet:	
Number of Dominant Species That are OBL, FACW, or FAC:	<u>0</u> (A)
Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0%</u> (A/B)
Prevalence Index worksheet:	
<u>Total % Cover of:</u>	<u>Multiply by:</u>
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:	
<input type="checkbox"/> Rapid Test for Hydrophytic Vegetation	
<input type="checkbox"/> Dominance Test is >50%	
<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Vegetation Strata:	
Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height	
Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.	
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.	
Woody vines – All woody vines greater than 3.28 ft in height	
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks: (include photo number here or on a separate sheet.) Old field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	2.5Y 2.5/1	95	2.5Y 5/2	5	D	PL M	Silt loam	dredge spoils mixed with driveway gravel

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

- | | | | | | |
|---|--|--|---|--|--|
| Hydric Soil Indicators: | | | Indicators for Problematic Hydric Soils³: | | |
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B) | <input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B) | | | |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B) | <input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R) | | | |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R) | | | |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Dark Surface (S7) (LRR K, L) | | | |
| <input type="checkbox"/> Stratified Layers (A5) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L) | | | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) | <input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L) | | | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R) | | | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B) | | | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | <input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B) | | | |
| <input type="checkbox"/> Sandy Redox (S5) | | <input type="checkbox"/> Red Parent Material (F21) | | | |
| <input type="checkbox"/> Stripped Matrix (S6) | | <input type="checkbox"/> Very Shallow Dark Surface (TF12) | | | |
| <input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B) | | <input type="checkbox"/> Other (Explain in Remarks) | | | |

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks: Fill at this location is substantial to create a steep stream bank next to a gravel driveway. Redox depletions observed were not formed in this location. In addition, the steepness of the slope prevented investigation to further depth. No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 126
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): linear concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 10</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The sample site has significantly disturbed vegetation due to mowing.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status															
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)														
1. _____	_____	<input type="checkbox"/>	_____															
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
5. _____	_____	<input type="checkbox"/>	_____															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
	<u>0</u>	= Total Cover																
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><u>Total % Cover of:</u></td> <td style="text-align:right;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>98</u></td> <td>x 4 = <u>392</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>98</u> (A)</td> <td><u>392</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.0</u>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>98</u>	x 4 = <u>392</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>98</u> (A)	<u>392</u> (B)
<u>Total % Cover of:</u>	<u>Multiply by:</u>																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>98</u>	x 4 = <u>392</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>98</u> (A)	<u>392</u> (B)																	
1. _____	_____	<input type="checkbox"/>	_____															
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
5. _____	_____	<input type="checkbox"/>	_____															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
	<u>0</u>	= Total Cover																
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.														
1. <u>Poa pratensis</u>	<u>80</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
2. <u>Taraxacum officinale</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>															
3. <u>Trifolium pratense</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>															
4. <u>Plantago major</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>															
5. _____	_____	<input type="checkbox"/>	_____															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
8. _____	_____	<input type="checkbox"/>	_____															
9. _____	_____	<input type="checkbox"/>	_____															
10. _____	_____	<input type="checkbox"/>	_____															
11. _____	_____	<input type="checkbox"/>	_____															
12. _____	_____	<input type="checkbox"/>	_____															
	<u>98</u>	= Total Cover																
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height														
1. _____	_____	<input type="checkbox"/>	_____															
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
	<u>0</u>	= Total Cover																
Remarks: (include photo number here or on a separate sheet.) The sample site is maintained as part of a lawn area. It exhibits indicators of wetland hydrology, including shallow inundation, and has a hydric soil. The site was determined to be wetland with significantly disturbed hydrophytic vegetation. Atypical (mowed) wetland.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	N 2.5/	100					Muck	
10-15	5Y 4/2	85	7.5YR 4/6	15	C	PL M	Clay loam	
15-18	N 2.5/	100					Muck	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)**
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)**
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)**

³Indicators 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: Soil is inundated with 2 inches of water, and therefore hydric by definition - Criteria 3. In addition, efforts to drain this area include a dredged waterway, drain tiles, and an excavated pond with clear discharge to the waterway. Further investigation of the soil confirmed additional indicators.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 127
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): small rise (graded/filled) Local relief (concave, convex, none): convex Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Palms muck (Pa) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Poa pratensis</u>	<u>55</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Taraxacum officinale</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Trifolium repens</u>	<u>12</u>	<input type="checkbox"/>	<u>FACU</u>	
4. <u>Schedonorus arundinaceus</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>102</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Remarks: (include photo number here or on a separate sheet.) Mowed lawn.				

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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					Sandy silt loam	w/ large cobble and rock fill
4-13	10YR 2/1	80					Sandy silt loam	w/ large cobble and rock fill
	N 2.5/	20					Muck	
13+								Too wet to pull up.

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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: This location was filled/graded in conjunction with pond construction and surrounding landscaping.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 128
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): depression (constructed pond) Local relief (concave, convex, none): concave Slope (%): N/A
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Water (W) 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 X, 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 11</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal. The unvegetated sample site has significantly disturbed vegetation due to management as an open water pond.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: <u>30'</u> radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	
Herb Stratum (Plot size: <u>5'</u> radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= Total Cover	
Woody Vine Stratum (Plot size: <u>30'</u> radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= 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: 0 (B)

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

Prevalence Index worksheet:

<u>Total % Cover of:</u>		<u>Multiply by:</u>	
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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) The sample site is managed as an unvegetated pond with a sand bottom/beach at this location. The site exhibits wetland hydrology indicators and has a hydric soil due to inundation. The pond is likely, at least in part, spring-fed. Therefore, the sample site was determined to be wetland with significantly disturbed hydrophytic vegetation. Open water.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 129
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): depression/swale Local relief (concave, convex, none): linear concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 12</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13.5</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Phalaris arundinacea</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
2. <u>Symphotrichum lateriflorum</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>		
3. <u>Poa pratensis</u>	<u>15</u>	<input type="checkbox"/>	<u>FACU</u>		
4. <u>Sonchus arvensis</u>	<u>15</u>	<input type="checkbox"/>	<u>FACU</u>		
5. <u>Cirsium arvense</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>		
6. <u>Carex vulpinoidea</u>	<u>3</u>	<input type="checkbox"/>	<u>OBL</u>		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>103</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Fresh (wet) meadow.					

Hydrophytic Vegetation Present? Yes No

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 130
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Brookston silt loam (BsA) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 12</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>9</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Water level in the soil pit was rising. The sample site is on a slightly concave toeslope well outside the cropped area, thus geomorphic position (D2) is checked.

	Absolute % Cover	Dominant Species?	Indicator Status															
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)														
1. _____	_____	<input type="checkbox"/>	_____															
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
5. _____	_____	<input type="checkbox"/>	_____															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:right;"><u>Total % Cover of:</u></td> <td style="text-align:right;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species <u>27</u></td> <td>x 1 = <u>27</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 = <u>100</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>45</u></td> <td>x 4 = <u>180</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>122</u> (A)</td> <td><u>307</u> (B)</td> </tr> </table> <p style="text-align:right;">Prevalence Index = B/A = <u>2.52</u></p>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species <u>27</u>	x 1 = <u>27</u>	FACW species <u>50</u>	x 2 = <u>100</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>45</u>	x 4 = <u>180</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>122</u> (A)	<u>307</u> (B)
<u>Total % Cover of:</u>	<u>Multiply by:</u>																	
OBL species <u>27</u>	x 1 = <u>27</u>																	
FACW species <u>50</u>	x 2 = <u>100</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>45</u>	x 4 = <u>180</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>122</u> (A)	<u>307</u> (B)																	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)																		
1. _____	_____	<input type="checkbox"/>	_____															
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
5. _____	_____	<input type="checkbox"/>	_____															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
	<u>0</u>	= Total Cover																
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.														
1. <u>Phalaris arundinacea</u>	<u>35</u>	<input checked="" type="checkbox"/>	<u>FACW</u>															
2. <u>Poa pratensis</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
3. <u>Solidago altissima</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
4. <u>Symphotrichum puniceum</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>OBL</u>															
5. <u>Carex pellita</u>	<u>12</u>	<input type="checkbox"/>	<u>OBL</u>															
6. <u>Elymus repens</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>															
7. <u>Solidago gigantea</u>	<u>10</u>	<input type="checkbox"/>	<u>FACW</u>															
8. <u>Symphotrichum lanceolatum</u>	<u>5</u>	<input type="checkbox"/>	<u>FACW</u>															
9. _____	_____	<input type="checkbox"/>	_____															
10. _____	_____	<input type="checkbox"/>	_____															
11. _____	_____	<input type="checkbox"/>	_____															
12. _____	_____	<input type="checkbox"/>	_____															
	<u>122</u>	= Total Cover																
<u>Woody Vine Stratum</u> (Plot size: _____)																		
1. _____	_____	<input type="checkbox"/>	_____															
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
	<u>0</u>	= Total Cover																
Remarks: (include photo number here or on a separate sheet.) Fresh (wet) meadow.																		

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	2.5Y 2.5/1	100					Silty clay loam	
11-20	2.5Y 2.5/1	90	7.5YR 3/4	10	C	PL M	Clay loam	
20-26	2.5Y 5/2	80	10YR 4/6	20	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 131
 Investigator(s): Chris Jors, Jen Dietl, and Shane Hevel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear convex Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>21</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>16</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Bromus inermis</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Poa pratensis</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
3. <u>Spartina pectinata</u>	<u>10</u>	<input type="checkbox"/>	<u>FACW</u>		
4. <u>Cirsium arvense</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>		
5. <u>Rosa multiflora</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>117</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Old field.					
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-11	10YR 2/1	100					Silt loam	
11-16	2.5Y 4/1	95	10YR 4/6	5	C	PL M	Clay loam	
16-26	5Y 5/2	75	10YR 5/6	25	C	PL M	Clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 132
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear convex Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) NWI classification: E1Kg
 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images.

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Bromus inermis</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	
2. <u>Equisetum arvense</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. <u>Poa pratensis</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
4. <u>Alliaria petiolata</u>	<u>15</u>	<input type="checkbox"/>	<u>FACU</u>	
5. <u>Symphotrichum puniceum</u>	<u>10</u>	<input type="checkbox"/>	<u>OBL</u>	
6. <u>Arctium minus</u>	<u>8</u>	<input type="checkbox"/>	<u>FACU</u>	
7. <u>Sonchus arvensis</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>	
8. <u>Solidago altissima</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>111</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Old field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 2/1	100					Silty clay loam	
6-12	10YR 2/1	90	10YR 4/6	10	C	PL M	Clay loam	
12-17	10YR 3/1	50	10YR 4/6	50	C	PL M	Clay loam	
17-25	5Y 5/2	80	7.5YR 4/6	15	C	PL M	Clay loam	
	5GY 5/2	5						

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-22-2019
 Applicant/Owner: _____ State: WI Sampling Point: 133
 Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): depression/swale Local relief (concave, convex, none): linear concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 12</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>29</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images.

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. <u>Salix discolor</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FACW</u>		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>8</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Carex stricta</u>	<u>75</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Phalaris arundinacea</u>	<u>15</u>	<input type="checkbox"/>	<u>FACW</u>		
3. <u>Cirsium arvense</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>		
4. <u>Urtica dioica</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>98</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Degraded sedge meadow.					

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-4	10YR 2/1	100					Silty clay loam	
4-13	10YR 2/1	95	10YR 4/6	5	C	PL M	Silty clay loam	
13-23	2.5Y 2.5/1	75	5YR 4/6	20	C	PL M	Clay loam	
			2.5Y 5/2	5	D	M		
23-31	2.5Y 5/2	60	5YR 4/6	30	C	PL M	Clay loam	
	10YR 2/1	10						

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)**
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-22-2019

Applicant/Owner: _____

State: WI

Sampling Point: 134

Investigator(s): Chris Jors, Jen Dietl, and Shane Heyel: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): hillslope

Local relief (concave, convex, none): linear

Slope (%): 0-2%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Brookston silt loam (BsA)

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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): 17
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. <u>Lonicera x bella</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
2. <u>Rosa multiflora</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>FACU</u>		
3. <u>Sambucus nigra</u>	<u>2</u>	<input checked="" type="checkbox"/>	<u>FACW</u>		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>8</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Bromus inermis</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
2. <u>Poa pratensis</u>	<u>20</u>	<input type="checkbox"/>	<u>FACU</u>		
3. <u>Urtica dioica</u>	<u>15</u>	<input type="checkbox"/>	<u>FAC</u>		
4. <u>Arctium minus</u>	<u>12</u>	<input type="checkbox"/>	<u>FACU</u>		
5. <u>Phalaris arundinacea</u>	<u>10</u>	<input type="checkbox"/>	<u>FACW</u>		
6. <u>Taraxacum officinale</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>120</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Old field.				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-14	10YR 2/1	100					Silt loam	
14-19	2.5Y 2.5/1	90	7.5YR 3/4	5	C	PL M	Clay loam	
			2.5Y 5/2	5	D	M		
19-25	5Y 5/2	75	10YR 4/6	15	C	PL M	Clay loam	
			5YR 3/4	10	C	PL M		

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)**
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-28-2019
 Applicant/Owner: _____ State: WI Sampling Point: 135
 Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) NWI classification: E1K
 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 12</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: The sample site is located on a slightly concave toeslope well outside the cropped area. Therefore, geomorphic position (D2) is checked.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. <u>Salix discolor</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>8</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Solidago altissima</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
2. <u>Impatiens capensis</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3. <u>Carex pellita</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	
4. <u>Agrostis gigantea</u>	<u>12</u>	<input type="checkbox"/>	<u>FACW</u>	
5. <u>Sonchus arvensis</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>	
6. <u>Equisetum arvense</u>	<u>8</u>	<input type="checkbox"/>	<u>FAC</u>	
7. <u>Daucus carota</u>	<u>5</u>	<input type="checkbox"/>	<u>UPL</u>	
8. <u>Poa pratensis</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>	
9. <u>Lilium michiganense</u>	<u>2</u>	<input type="checkbox"/>	<u>FACW</u>	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>102</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= 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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Fresh (wet) meadow.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	N 2.5/	100					Muck	
7-12	2.5Y 3/1	94	10YR 3/4	6	C	PL M	Silty clay loam	
12-19	10YR 6/1	90	2.5Y 5/6	10	C	PL M	Silty clay loam	with disintegrating dolomite

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input checked="" type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)			
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)			
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)			
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)			

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-28-2019
 Applicant/Owner: State: WI Sampling Point: 136
 Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 2-6%
 Subregion (LRR or MLRA): LRR K Lat: Long: Datum:
 Soil Map Unit Name: Hochheim loam (HmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: <u> </u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>12</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Carya ovata</u>	<u>35</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
2. <u>Quercus macrocarpa</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>55</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Rhamnus cathartica</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. <u>Rosa multiflora</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>11</u>	= Total Cover	

Herb Stratum (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Bromus inermis</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>UPL</u>
2. <u>Impatiens capensis</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
3. <u>Cirsium arvense</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
4. <u>Equisetum arvense</u>	<u>4</u>	<input type="checkbox"/>	<u>FAC</u>
5. <u>Geum canadense</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>
6. <u>Alliaria petiolata</u>	<u>2</u>	<input type="checkbox"/>	<u>FACU</u>
7. _____	_____	<input type="checkbox"/>	_____
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>104</u>	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 29% (A/B)

Prevalence Index worksheet:

<u>Total % Cover of:</u>	<u>Multiply by:</u>
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:**
- Rapid Test for Hydrophytic Vegetation
 - Dominance Test is >50%
 - Prevalence Index is ≤3.0¹
 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Old field and hardwoods.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 2/1	100					Silty clay loam	
10-14	10YR 4/3	60	10YR 3/6	40	C	PL M	Clay loam	with gravel
14+								Refusal: Rocks

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)
		<input type="checkbox"/> Other (Explain in Remarks)

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: Rocks
 Depth (inches): 14

Hydric Soil Present? Yes No

Remarks: No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-28-2019
 Applicant/Owner: State: WI Sampling Point: 137
 Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC Section, Township, Range: SW Quarter, Section 21, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: Long: Datum:
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: <u> </u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. <u>Rosa multiflora</u>	<u>12</u>	<input checked="" type="checkbox"/>	FACU		
2. <u>Rhamnus cathartica</u>	<u>2</u>	<input type="checkbox"/>	FAC		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>14</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Poa pratensis</u>	<u>25</u>	<input checked="" type="checkbox"/>	FACU	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Bromus inermis</u>	<u>20</u>	<input checked="" type="checkbox"/>	UPL		
3. <u>Phalaris arundinacea</u>	<u>18</u>	<input checked="" type="checkbox"/>	FACW		
4. <u>Cirsium arvense</u>	<u>15</u>	<input type="checkbox"/>	FACU		
5. <u>Sonchus arvensis</u>	<u>15</u>	<input type="checkbox"/>	FACU		
6. <u>Daucus carota</u>	<u>10</u>	<input type="checkbox"/>	UPL		
7. <u>Agrostis gigantea</u>	<u>8</u>	<input type="checkbox"/>	FACW		
8. <u>Equisetum arvense</u>	<u>5</u>	<input type="checkbox"/>	FAC		
9. <u>Parthenocissus inserta</u>	<u>3</u>	<input type="checkbox"/>	FACU		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>119</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. <u>Vitis riparia</u>	<u>2</u>	<input type="checkbox"/>	FAC	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>2</u>	= Total Cover			

Remarks: (include photo number here or on a separate sheet.) Old field.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-28-2019

Applicant/Owner: _____

State: WI

Sampling Point: 138

Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): toeslope

Local relief (concave, convex, none): concave

Slope (%): 0-3%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Lamartine silt loam (LmB)

NWI classification: E1Kg

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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 12</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>11</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: The sample site is located on a concave toeslope well outside the cropped area. Therefore, geomorphic position (D2) is checked.

	Absolute % Cover	Dominant Species?	Indicator Status															
Tree Stratum (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)														
1. _____	_____	<input type="checkbox"/>	_____															
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
5. _____	_____	<input type="checkbox"/>	_____															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <table style="width:100%; border:none;"> <tr> <td style="text-align:center;"><u>Total % Cover of:</u></td> <td style="text-align:center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species <u>45</u></td> <td>x 1 = <u>45</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>23</u></td> <td>x 3 = <u>69</u></td> </tr> <tr> <td>FACU species <u>43</u></td> <td>x 4 = <u>172</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>111</u></td> <td>(A) <u>286</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.58</u>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	OBL species <u>45</u>	x 1 = <u>45</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>23</u>	x 3 = <u>69</u>	FACU species <u>43</u>	x 4 = <u>172</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>111</u>	(A) <u>286</u> (B)
<u>Total % Cover of:</u>	<u>Multiply by:</u>																	
OBL species <u>45</u>	x 1 = <u>45</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>23</u>	x 3 = <u>69</u>																	
FACU species <u>43</u>	x 4 = <u>172</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>111</u>	(A) <u>286</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)																		
1. <u>Rosa multiflora</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>															
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
5. _____	_____	<input type="checkbox"/>	_____															
6. _____	_____	<input type="checkbox"/>	_____															
7. _____	_____	<input type="checkbox"/>	_____															
	<u>3</u>	= Total Cover																
Herb Stratum (Plot size: <u>5'</u> radius)																		
1. <u>Solidago altissima</u>	<u>35</u>	<input checked="" type="checkbox"/>	<u>FACU</u>															
2. <u>Symphotrichum puniceum</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>OBL</u>															
3. <u>Carex pellita</u>	<u>15</u>	<input type="checkbox"/>	<u>OBL</u>															
4. <u>Equisetum arvense</u>	<u>15</u>	<input type="checkbox"/>	<u>FAC</u>															
5. <u>Alliaria petiolata</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>															
6. <u>Geum canadense</u>	<u>5</u>	<input type="checkbox"/>	<u>FAC</u>															
7. _____	_____	<input type="checkbox"/>	_____															
8. _____	_____	<input type="checkbox"/>	_____															
9. _____	_____	<input type="checkbox"/>	_____															
10. _____	_____	<input type="checkbox"/>	_____															
11. _____	_____	<input type="checkbox"/>	_____															
12. _____	_____	<input type="checkbox"/>	_____															
	<u>105</u>	= Total Cover																
Woody Vine Stratum (Plot size: <u>30'</u> radius)																		
1. <u>Vitis riparia</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>															
2. _____	_____	<input type="checkbox"/>	_____															
3. _____	_____	<input type="checkbox"/>	_____															
4. _____	_____	<input type="checkbox"/>	_____															
	<u>3</u>	= Total Cover																
Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																		
¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.																		
Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		
Remarks: (include photo number here or on a separate sheet.) Fresh (wet) meadow.																		

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-28-2019

Applicant/Owner: _____

State: WI

Sampling Point: 139

Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC

Section, Township, Range: SW Quarter, Section 21, T8N-R19E

Landform (hillslope, terrace, etc.): depression

Local relief (concave, convex, none): concave

Slope (%): 0-3%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Lamartine silt loam (LmB)

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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 12</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations:

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

Water Table Present? Yes No Depth (inches): 12

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

Wetland Hydrology Present? Yes No

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

Remarks:

	Absolute % Cover	Dominant Species?	Indicator Status		
Tree Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <div style="display: flex; justify-content: space-between;"> <u>Total % Cover of:</u> <u>Multiply by:</u> </div> 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 = _____	
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____		
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Herb Stratum (Plot size: <u>5'</u> radius)					
1. <u>Phalaris arundinacea</u>	<u>85</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
5. _____	_____	<input type="checkbox"/>	_____		
6. _____	_____	<input type="checkbox"/>	_____		
7. _____	_____	<input type="checkbox"/>	_____		
8. _____	_____	<input type="checkbox"/>	_____		
9. _____	_____	<input type="checkbox"/>	_____		
10. _____	_____	<input type="checkbox"/>	_____		
11. _____	_____	<input type="checkbox"/>	_____		
12. _____	_____	<input type="checkbox"/>	_____		
	<u>85</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u>30'</u> radius)					
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height	
2. _____	_____	<input type="checkbox"/>	_____		
3. _____	_____	<input type="checkbox"/>	_____		
4. _____	_____	<input type="checkbox"/>	_____		
	<u>0</u>	= Total Cover			
Remarks: (include photo number here or on a separate sheet.) Degraded fresh (wet) meadow.					

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10	10YR 2/1	100					Silty clay loam	
10-18	2.5Y 5/1	60	10YR 4/6	20	C	PL M	Clay loam	
	2.5Y 4/1	20						
18+								Too wet to pull up.

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)**
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-28-2019
 Applicant/Owner: State: WI Sampling Point: 140
 Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: Long: Datum:
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 15</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>12</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: The sample site is on a wooded, concave toeslope. Therefore, geomorphic position (D2) is checked.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. <u>Tilia americana</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>8</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>63%</u> (A/B)
2. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>40</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. <u>Fraxinus pennsylvanica</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	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 = _____
2. <u>Tilia americana</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. <u>Carya ovata</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>	
4. <u>Rhamnus cathartica</u>	<u>5</u>	<input type="checkbox"/>	<u>FAC</u>	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>60</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Carex radiata</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is $\leq 3.0^1$ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must Be present, unless disturbed or problematic.
2. <u>Symphytotrichum lateriflorum</u>	<u>12</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. <u>Carex blanda</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
4. <u>Carex hirtifolia</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>NI (UPL)</u>	
5. <u>Oxypolis rigidior</u>	<u>8</u>	<input type="checkbox"/>	<u>OBL</u>	
6. <u>Viola affinis</u>	<u>8</u>	<input type="checkbox"/>	<u>FACW</u>	
7. <u>Apios americana</u>	<u>6</u>	<input type="checkbox"/>	<u>FACW</u>	
8. <u>Rosa multiflora</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>	
9. <u>Circaea canadense</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>	
10. <u>Fraxinus pennsylvanica</u>	<u>3</u>	<input type="checkbox"/>	<u>FACW</u>	
11. <u>Hydrophyllum virginianum</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>	
12. <u>Parthenocissus inserta</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>	
	<u>88</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Remarks: (include photo number here or on a separate sheet.) Herb layer also included Rhamnus cathartica (2%) FAC. Hardwood swamp.				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-28-2019

Applicant/Owner: _____

State: WI

Sampling Point: 141

Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC

Section, Township, Range: NW Quarter, Section 28, T8N-R19E

Landform (hillslope, terrace, etc.): hillslope

Local relief (concave, convex, none): linear

Slope (%): 0-3%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Lamartine silt loam (LmB)

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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Carya cordiformis</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. <u>Populus tremuloides</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>35</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus pennsylvanica</u>	<u>45</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Populus tremuloides</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. <u>Zanthoxylum americanum</u>	<u>12</u>	<input type="checkbox"/>	<u>FACU</u>
4. <u>Rhamnus cathartica</u>	<u>10</u>	<input type="checkbox"/>	<u>FAC</u>
5. <u>Tilia americana</u>	<u>8</u>	<input type="checkbox"/>	<u>FACU</u>
6. <u>Lonicera x bella</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>
7. _____	_____	<input type="checkbox"/>	_____
	<u>93</u>	= Total Cover	

Herb Stratum (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Viola affinis</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Alliaria petiolata</u>	<u>18</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
3. <u>Carex sparganioides</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
4. <u>Hydrophyllum virginianum</u>	<u>10</u>	<input type="checkbox"/>	<u>FAC</u>
5. <u>Carex radiata</u>	<u>8</u>	<input type="checkbox"/>	<u>FAC</u>
6. <u>Circaea canadense</u>	<u>8</u>	<input type="checkbox"/>	<u>FACU</u>
7. <u>Geum canadense</u>	<u>5</u>	<input type="checkbox"/>	<u>FAC</u>
8. <u>Equisetum arvense</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>
9. <u>Rhamnus cathartica</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>90</u>	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Vitis riparia</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>10</u>	= 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:

<u>Total % Cover of:</u>	<u>Multiply by:</u>
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:

- Rapid Test for Hydrophytic Vegetation
- Dominance Test is >50%**
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present?

Yes No

Remarks: (include photo number here or on a separate sheet.) Undifferentiated thicket.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-28-2019
 Applicant/Owner: _____ State: WI Sampling Point: 142
 Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): slight hillslope Local relief (concave, convex, none): linear Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>14</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images.

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status																	
Tree Stratum (Plot size: <u>30'</u> radius)																				
1. _____	_____	<input type="checkbox"/>	_____	Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)																
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>0</u>	= Total Cover		Prevalence Index worksheet: <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><u>Total % Cover of:</u></td> <td style="text-align: center;"><u>Multiply by:</u></td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	<u>Total % Cover of:</u>	<u>Multiply by:</u>	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 = _____	
<u>Total % Cover of:</u>	<u>Multiply by:</u>																			
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 = _____																				
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)																				
1. <u>Lonicera x bella</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																
2. <u>Ulmus americana</u>	<u>7</u>	<input checked="" type="checkbox"/>	<u>FACW</u>																	
3. <u>Rhamnus cathartica</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FAC</u>																	
4. <u>Rosa multiflora</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>																	
5. _____	_____	<input type="checkbox"/>	_____																	
6. _____	_____	<input type="checkbox"/>	_____																	
7. _____	_____	<input type="checkbox"/>	_____																	
	<u>25</u>	= Total Cover																		
Herb Stratum (Plot size: <u>5'</u> radius)																				
1. <u>Bromus inermis</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	Definitions of Vegetation Strata: Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																
2. <u>Monarda fistulosa</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>																	
3. <u>Poa pratensis</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>																	
4. <u>Equisetum arvense</u>	<u>12</u>	<input type="checkbox"/>	<u>FAC</u>																	
5. <u>Agrimonia gryposepala</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>																	
6. <u>Carex grisea</u>	<u>8</u>	<input type="checkbox"/>	<u>FAC</u>																	
7. <u>Solidago altissima</u>	<u>8</u>	<input type="checkbox"/>	<u>FACU</u>																	
8. <u>Parthenocissus inserta</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>																	
9. <u>Taraxacum officinale</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>																	
10. <u>Lycopus americanus</u>	<u>2</u>	<input type="checkbox"/>	<u>OBL</u>																	
11. <u>Ulmus americana</u>	<u>2</u>	<input type="checkbox"/>	<u>FACW</u>																	
12. _____	_____	<input type="checkbox"/>	_____																	
	<u>112</u>	= Total Cover																		
Woody Vine Stratum (Plot size: <u>30'</u> radius)																				
1. <u>Vitis riparia</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>																	
2. _____	_____	<input type="checkbox"/>	_____																	
3. _____	_____	<input type="checkbox"/>	_____																	
4. _____	_____	<input type="checkbox"/>	_____																	
	<u>3</u>	= Total Cover																		

Remarks: (include photo number here or on a separate sheet.) Old field.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 3/2	100					Silty clay loam	
7-12	10YR 5/3	85	10YR 5/6	15	C	PL M	Silt loam	
12-24	10YR 4/3	50	7.5YR 4/4	50	C	PL M	Silty clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms - Mitigation Bank Area City/County: Village of Sussex/Waukesha County Sampling Date: 5-28-2019
 Applicant/Owner: _____ State: WI Sampling Point: 143
 Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): depression Local relief (concave, convex, none): concave Slope (%): 0-2%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Pella silt loam (Ph) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 15</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>5</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), Aerial Photos (Exhibit 4), and NAIP/FSA Images.

Remarks: The sample site is in a depression, but geomorphic position, indicator D2, is not checked due to the presence of a drain tile system.

	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u>30'</u> radius)				
1. <u>Cornus alba</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Crataegus crus-galli</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. <u>Ulmus americana</u>	<u>3</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
4. <u>Cornus racemosa</u>	<u>2</u>	<input type="checkbox"/>	<u>FAC</u>	
5. <u>Acer ginnala</u>	<u>1</u>	<input type="checkbox"/>	<u>NI (UPL)</u>	
6. <u>Frangula alnus</u>	<u>1</u>	<input type="checkbox"/>	<u>FAC</u>	
7. <u>Fraxinus pennsylvanica</u>	<u>1</u>	<input type="checkbox"/>	<u>FACW</u>	
	<u>14</u>	= Total Cover		
Herb Stratum (Plot size: <u>5'</u> radius)				
1. <u>Carex grisea</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Agrostis gigantea</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3. <u>Equisetum arvense</u>	<u>18</u>	<input type="checkbox"/>	<u>FAC</u>	
4. <u>Symphotrichum puniceum</u>	<u>15</u>	<input type="checkbox"/>	<u>OBL</u>	
5. <u>Poa pratensis</u>	<u>12</u>	<input type="checkbox"/>	<u>FACU</u>	
6. <u>Impatiens capensis</u>	<u>5</u>	<input type="checkbox"/>	<u>FACW</u>	
7. <u>Achillea millefolium</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>	
8. <u>Taraxacum officinale</u>	<u>3</u>	<input type="checkbox"/>	<u>FACU</u>	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>116</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= 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:
 Rapid Test for Hydrophytic Vegetation
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:
Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height
Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Fresh (wet) meadow with scattered lowland shrubs.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 3/1	100					Silty clay loam	
7-18	10YR 5/2	70	10YR 4/6	30	C	PL M	Silty clay loam	
18+								Too wet to pull

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)**
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-28-2019
 Applicant/Owner: State: WI Sampling Point: 144
 Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): spring run Local relief (concave, convex, none): linear, concave Slope (%): 12-20%
 Subregion (LRR or MLRA): LRR K Lat: Long: Datum:
 Soil Map Unit Name: Hochheim loam (HmD2) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 16</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u> </u> Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u> </u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Source of surface water is a hillside spring.

	Absolute % Cover	Dominant Species?	Indicator Status	
<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)				Dominance Test worksheet: Number of Dominant Species That are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		
<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)				
1. <u>Impatiens capensis</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
2. <u>Ranunculus hispidus</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
5. _____	_____	<input type="checkbox"/>	_____	
6. _____	_____	<input type="checkbox"/>	_____	
7. _____	_____	<input type="checkbox"/>	_____	
8. _____	_____	<input type="checkbox"/>	_____	
9. _____	_____	<input type="checkbox"/>	_____	
10. _____	_____	<input type="checkbox"/>	_____	
11. _____	_____	<input type="checkbox"/>	_____	
12. _____	_____	<input type="checkbox"/>	_____	
	<u>18</u>	= Total Cover		
<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)				
1. _____	_____	<input type="checkbox"/>	_____	
2. _____	_____	<input type="checkbox"/>	_____	
3. _____	_____	<input type="checkbox"/>	_____	
4. _____	_____	<input type="checkbox"/>	_____	
	<u>0</u>	= Total Cover		

Hydrophytic Vegetation Indicators:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Open water of a spring run.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-28-2019

Applicant/Owner: _____

State: WI

Sampling Point: 145

Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC

Section, Township, Range: NW Quarter, Section 28, T8N-R19E

Landform (hillslope, terrace, etc.): hillslope

Local relief (concave, convex, none): linear

Slope (%): 0-3%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Lamartine silt loam (LmB)

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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____
 Water Table Present? Yes No Depth (inches): _____
 Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

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

Remarks: No wetland hydrology indicators observed.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prunus serotina</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
2. <u>Fraxinus pennsylvanica</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>75</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Rhamnus cathartica</u>	<u>45</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. <u>Lonicera x bella</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>70</u>	= Total Cover	

Herb Stratum (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Impatiens capensis</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Carex grisea</u>	<u>12</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. <u>Viola sororia</u>	<u>12</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
4. <u>Alliaria petiolata</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
5. <u>Osmorhiza longistylis</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
6. <u>Rhamnus cathartica</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
7. <u>Geranium maculatum</u>	<u>8</u>	<input type="checkbox"/>	<u>FACU</u>
8. <u>Ranunculus recurvatus</u>	<u>8</u>	<input type="checkbox"/>	<u>FACW</u>
9. <u>Arisaema triphyllum</u>	<u>7</u>	<input type="checkbox"/>	<u>FAC</u>
10. <u>Carex rosea</u>	<u>7</u>	<input type="checkbox"/>	<u>FACU</u>
11. <u>Circaea canadense</u>	<u>7</u>	<input type="checkbox"/>	<u>FACU</u>
12. _____	_____	<input type="checkbox"/>	_____
	<u>106</u>	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= 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: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

<u>Total % Cover of:</u>	<u>Multiply by:</u>
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:**
- Rapid Test for Hydrophytic Vegetation
 - Dominance Test is >50%**
 - Prevalence Index is ≤3.0¹
 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Hardwoods.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-15	10YR 3/1	100					Silt loam	
15-24	10YR 4/2	100					Silty clay loam	with gravel

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-28-2019
 Applicant/Owner: _____ State: WI Sampling Point: 146
 Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 16</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0 (at surface)</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Sample site is on a hillside spring seep.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus pennsylvanica</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Prunus serotina</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
3. <u>Acer negundo</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>40</u>	= Total Cover	

Sapling/Shrub Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Lonicera x bella</u>	<u>8</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>8</u>	= Total Cover	

Herb Stratum (Plot size: 5' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Impatiens capensis</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Viola affinis</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
3. <u>Alliaria petiolata</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>
4. <u>Geum canadense</u>	<u>5</u>	<input type="checkbox"/>	<u>FAC</u>
5. <u>Symplocarpus foetidus</u>	<u>5</u>	<input type="checkbox"/>	<u>OBL</u>
6. <u>Arisaema triphyllum</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>
7. <u>Cryptotaenia canadensis</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>61</u>	= Total Cover	

Woody Vine Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= 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: 6 (B)

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

Prevalence Index worksheet:

<u>Total % Cover of:</u>	<u>Multiply by:</u>
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:

- Rapid Test for Hydrophytic Vegetation
- Dominance Test is >50%**
- Prevalence Index is ≤3.0¹
- Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present?

Yes No

Remarks: (include photo number here or on a separate sheet.) Spring seep.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-12	10YR 2/1	100					Silt loam	
12-18	10YR 4/2	70	10YR 4/6	30	C	PL M	Clay loam	
18+								Too wet to pull up.

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-28-2019
 Applicant/Owner: _____ State: WI Sampling Point: 147
 Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 0-3%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Lamartine silt loam (LmB) 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>22</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status
<u>Tree Stratum</u> (Plot size: 30' radius)			
1. <u>Prunus serotina</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
2. <u>Quercus alba</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
3. <u>Fraxinus pennsylvanica</u>	<u>15</u>	<input type="checkbox"/>	<u>FACW</u>
4. <u>Ostrya virginiana</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>80</u>	= Total Cover	

<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)			
1. <u>Lonicera x bella</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
2. <u>Rhamnus cathartica</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>40</u>	= Total Cover	

<u>Herb Stratum</u> (Plot size: 5' radius)			
1. <u>Impatiens capensis</u>	<u>22</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Arisaema triphyllum</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. <u>Alliaria petiolata</u>	<u>8</u>	<input type="checkbox"/>	<u>FACU</u>
4. <u>Geranium maculatum</u>	<u>8</u>	<input type="checkbox"/>	<u>FACU</u>
5. <u>Circaea canadense</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>
6. <u>Prunus serotina</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>
7. <u>Cryptotaenia canadensis</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>
8. <u>Osmundastrum cinnamomeum</u>	<u>2</u>	<input type="checkbox"/>	<u>FACW</u>
9. <u>Osmorhiza longistylis</u>	<u>1</u>	<input type="checkbox"/>	<u>FACU</u>
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>64</u>	= Total Cover	

<u>Woody Vine Stratum</u> (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= 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: 6 (B)

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

Prevalence Index worksheet:

<u>Total % Cover of:</u>		<u>Multiply by:</u>	
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:**
- Rapid Test for Hydrophytic Vegetation
 - Dominance Test is >50%
 - Prevalence Index is ≤3.0¹
 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 - Problematic Hydrophytic Vegetation¹ (Explain)
- ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Hardwoods.

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/1	100					Silt loam	
6-13	10YR 4/3	100					Silt loam	
13-24	10YR 4/4	100					Silty clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS= Masked Sand Grains ²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:			Indicators for Problematic Hydric Soils³:		
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)			
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LLR K, L, R)			
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)			
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)			
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)			
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)			
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)			
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> Red Parent Material (F21)			
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)			
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)		<input type="checkbox"/> Other (Explain in Remarks)			

³Indicators of Hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks: No hydric soil indicators observed.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc. City/County: Village of Sussex/Waukesha County Sampling Date: 5-28-2019
 Applicant/Owner: _____ State: WI Sampling Point: 148
 Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC Section, Township, Range: NW Quarter, Section 28, T8N-R19E
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): linear Slope (%): 12-20%
 Subregion (LRR or MLRA): LRR K Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Hochheim loam (HmD2) 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is the Sampled Area within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, optional Wetland Site ID: _____
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>17</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: No wetland hydrology indicators observed.

	Absolute % Cover	Dominant Species?	Indicator Status
<u>Tree Stratum</u> (Plot size: 30' radius)			
1. <u>Prunus serotina</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
2. <u>Fraxinus pennsylvanica</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>45</u>	= Total Cover	
<u>Sapling/Shrub Stratum</u> (Plot size: 30' radius)			
1. <u>Rhamnus cathartica</u>	<u>65</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>65</u>	= Total Cover	
<u>Herb Stratum</u> (Plot size: 5' radius)			
1. <u>Impatiens capensis</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Viola sororia</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. <u>Alliaria petiolata</u>	<u>12</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
4. <u>Arisaema triphyllum</u>	<u>12</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
5. <u>Circaea canadense</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>
6. <u>Rhamnus cathartica</u>	<u>10</u>	<input type="checkbox"/>	<u>FAC</u>
7. <u>Cryptotaenia canadensis</u>	<u>8</u>	<input type="checkbox"/>	<u>FAC</u>
8. <u>Osmorhiza longistylis</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>
9. <u>Symplocarpus foetidus</u>	<u>5</u>	<input type="checkbox"/>	<u>OBL</u>
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>107</u>	= Total Cover	
<u>Woody Vine Stratum</u> (Plot size: 30' radius)			
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= 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: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 71% (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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Hardwoods with small opening in the canopy due to adjacent spring seep/run.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/1	100					Silt loam	
6-10	10YR 4/2	100					Silt loam	
10-24	10YR 4/3	90	10YR 3/4	10	C	PL M	Silty clay loam	

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Hickory Hill Farms, Inc.

City/County: Village of Sussex/Waukesha County

Sampling Date: 5-28-2019

Applicant/Owner: _____

State: WI

Sampling Point: 149

Investigator(s): Chris Jors, Jen Dietl, and Dan Carter: SEWRPC

Section, Township, Range: NW Quarter, Section 28, T8N-R19E

Landform (hillslope, terrace, etc.): depression

Local relief (concave, convex, none): concave

Slope (%): 12-20%

Subregion (LRR or MLRA): LRR K

Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: Hochheim loam (HmD2)

NWI classification: T3K

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** No (If no, explain in Remarks)

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? **Yes** No

Are "Normal Circumstances" present? **Yes** No

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If, needed, explain any answers in Remarks.)

(If, needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the Sampled Area within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, optional Wetland Site ID: <u>PCA 16</u>
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Remarks: (Explain alternative procedures here or in a separate report.) 90-day antecedent precipitation is normal.

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>23</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Topo Map (Exhibit 1), WWI Map (Exhibit 2), Soils Map (Exhibit 3), and Aerial Photos (Exhibit 4).

Remarks: Sample site is in a ground water seepage/spring area.

<u>Tree Stratum</u> (Plot size: <u>30'</u> radius)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1. <u>Fraxinus pennsylvanica</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Carya cordiformis</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. <u>Ulmus americana</u>	<u>15</u>	<input type="checkbox"/>	<u>FACW</u>
4. <u>Acer negundo</u>	<u>5</u>	<input type="checkbox"/>	<u>FAC</u>
5. <u>Prunus serotina</u>	<u>5</u>	<input type="checkbox"/>	<u>FACU</u>
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>80</u>	= Total Cover	

<u>Sapling/Shrub Stratum</u> (Plot size: <u>30'</u> radius)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1. <u>Rhamnus cathartica</u>	<u>60</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
5. _____	_____	<input type="checkbox"/>	_____
6. _____	_____	<input type="checkbox"/>	_____
7. _____	_____	<input type="checkbox"/>	_____
	<u>60</u>	= Total Cover	

<u>Herb Stratum</u> (Plot size: <u>5'</u> radius)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1. <u>Impatiens capensis</u>	<u>35</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
2. <u>Arisaema triphyllum</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
3. <u>Alliaria petiolata</u>	<u>10</u>	<input type="checkbox"/>	<u>FACU</u>
4. <u>Viola sororia</u>	<u>10</u>	<input type="checkbox"/>	<u>FAC</u>
5. <u>Circaea canadense</u>	<u>8</u>	<input type="checkbox"/>	<u>FACU</u>
6. <u>Rhamnus cathartica</u>	<u>5</u>	<input type="checkbox"/>	<u>FAC</u>
7. <u>Maianthemum stellatum</u>	<u>3</u>	<input type="checkbox"/>	<u>FAC</u>
8. _____	_____	<input type="checkbox"/>	_____
9. _____	_____	<input type="checkbox"/>	_____
10. _____	_____	<input type="checkbox"/>	_____
11. _____	_____	<input type="checkbox"/>	_____
12. _____	_____	<input type="checkbox"/>	_____
	<u>86</u>	= Total Cover	

<u>Woody Vine Stratum</u> (Plot size: <u>30'</u> radius)	<u>Absolute % Cover</u>	<u>Dominant Species?</u>	<u>Indicator Status</u>
1. _____	_____	<input type="checkbox"/>	_____
2. _____	_____	<input type="checkbox"/>	_____
3. _____	_____	<input type="checkbox"/>	_____
4. _____	_____	<input type="checkbox"/>	_____
	<u>0</u>	= 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:

Rapid Test for Hydrophytic Vegetation

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Definitions of Vegetation Strata:

Tree – Woody plants 3in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height

Sapling/shrub – Woody plants less than 3in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height

Hydrophytic Vegetation Present? Yes No

Remarks: (include photo number here or on a separate sheet.) Hardwood swamp.

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7	10YR 3/1	100					Silt loam	
7-17	10YR 4/2	97	10YR 3/6	3	C	PL M	Silt loam	
17-22	2.5Y 5/3	95	2.5Y 5/4	5	C	PL M	Silt loam	with gravel
22-25	10YR 4/4	100					Silty clay loam	with gravel

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

²Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)**
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)**
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

Indicators for Problematic Hydric Soils³:

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LLR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LLR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

³Indicators 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:

Exhibit 9. Site Photos

Hickory Hills Farm, Inc.
N67 W25913 Silver Spring Drive
SW and SE Quarters, Section 21 and
NW Quarter, Section 28, T8N-R19E
Village of Sussex, Waukesha County

Photo 1. South view, wetland sample site 6, PCA 1. Atypical (mowed) wetland within a grassed swale drainageway. Sample sites 8 and 11, located south of the pictured culvert, are similar.



Photo 2. North view, upland sample site 5. Mowed lawn adjacent to a grassed swale drainageway. Sample sites 7, 9, and 10 are similar.



Photo 3. West view, wetland sample site 60, PCA 2. Open water in a straightened tributary to Spring Creek. Sample sites 2, 61, 67, 94, and 105 are similar. Sample site 96 is fresh (wet) meadow along the edge of this waterway.



Photo 4. ESE view, upland sample site 1. Agricultural field adjacent to a tributary to Spring Creek. Sample site 66 is similar.



Photo 5. SW view, upland sample site 62. Agricultural field on a narrow berm along the tributary to Spring Creek. Sample sites 58, 93, and 97 are similar.



Photo 6. Upland sample site 106. Old field adjacent to the tributary to Spring Creek.



Photo 7. Upland sample site 125. Old field. This site is on a modified, steep bank of the tributary to Spring Creek associated with an access driveway off of Mary Hill Road.



Photo 8. North view, upland sample site 3. Mowed lawn/old field adjacent to a tributary drainageway. This drainageway is impacted by barnyard runoff. Sample site 12 is similar.



Photo 9. SW view, upland sample site 15. Old field with dominant reed canary grass (*Phalaris arundinacea*) along a tributary drainageway. Sample sites 14 and 17 are similar.



Photo 10. Wetland sample site 4, PCA 2. Fresh (wet) meadow within a tributary drainageway. Sample sites 13 and 16 are similar.



Photo 11. West view, wetland sample site 22, PCA 3. Fresh (wet) meadow with adjacent excavated pond in the background.



Photo 12. South view, upland sample site 23. Old field on a berm/dredge spoils in between wetland PCA numbers 3 and 4.



Photo 13. NW view, upland sample site 24. Agricultural field impacted by manure spreading and/or slurry discharge. While wetland hydrology was present, soils were not hydric.



Photo 14. NE view, wetland sample site 31, PCA 4. Atypical (farmed) wetland with groundwater (hillside) seepage hydrology. Sample sites 20, 21, 25, 26, 28, 33, 35, and 38 are similar.



Photo 15. Wetland hydrology indicator B2, algal crust, near sample site 35 (PCA 4).



Photo 16. Wetland hydrology indicator B5, iron deposits, on the soil surface at sample site 38, PCA 4 (see center of photo). Also, cursed buttercup (*Ranunculus sceleratus*), an obligate wetland species, is the only plant present.



Photo 17. NE view, upland sample site 36. Agricultural field just outside the wetland PCA 4. Samples sites 19, 27, 29, 30, 32, and 37 are similar.



Photo 18. SE view, wetland sample site 50, PCA 5. Atypical (farmed) wetland. Sample sites 34, 39, 44, 46, 49, 57, 59, 63, and 64 are similar.



Photo 19. South view, upland sample site 48. Agricultural field.
Sample sites 40, 41, 42, 43, 45, 47, 51, 53, 56, and 65 are similar.



Photo 20. South view, drain tile blowout near sample site 47.



Photo 21. SW view, wetland sample site 52, PCA 5. Atypical (farmed) wetland - drainageway. Wetland hydrology indicator B3, drift deposits, are present.



Photo 22. East view toward upland portion of drainageway from wetland PCA 5 boundary, near sample site 52.



Photo 23. South view, wetland sample site 80, PCA 6. Atypical (farmed) wetland.



Photo 24. South view, upland sample site 81. Agricultural field (on the north side of wetland PCA 6).



Photo 25. NE view, wetland sample site 79, PCA 7. Atypical (farmed) wetland.



Photo 26. NE view, upland sample site 78. Agricultural field within a broad swale just outside wetland PCA 7. Sample site 77 is similar.



Photo 27. South view, upland sample site 68. Agricultural field. Sample site 69 is similarly in the pictured upland broad swale, but closer to the delineated wetland boundary of PCA 8.



Photo 28. SE view, wetland sample site 70, PCA 8. Atypical (farmed) wetland.



Photo 29. Wetland hydrology indicator B3, drift deposits, at sample site 70, PCA 8.



Photo 30. Wetland hydrology indicator B2, sediment deposits, at sample site 70, PCA 8.



Photo 31. South view, wetland sample site 71, PCA 9. Atypical (farmed) wetland.



Photo 32. Wetland hydrology indicator B9, water-stained leaves, at sample site 71.



Photo 33. South view, upland sample site 72. Edge of agricultural field.



Photo 34. South view, wetland sample site 76, PCA 9. Atypical (farmed) wetland.



Photo 35. Wetland hydrology indicator C8, crayfish burrow, at sample site 76, PCA 9.



Photo 36. NW view, upland sample site 75. Agricultural field just outside PCA 9.



Photo 37. WSW view, wetland sample site 87, PCA 10. Atypical (farmed) wetland – corn previous year. Sample sites 84, 117, 119, 120, 122, and 124 are similar.



Photo 38. North view, drainageway within PCA 10 exposing large cobbles and rocks near sample site 87.



Photo 39. WSW view, upland sample site 88. Agricultural field (corn) around portions of PCA 10. Sample sites 116 is similar.



Photo 40. West view, upland sample site 121. Old field with gravel/road bed fill along the west edge of PCA 10. Sample site 123 is similar.



Photo 41. South view, wetland sample site 91, southeastern portion of PCA 10. Atypical (farmed) wetland. Sample sites 90 and 115 are similar.



Photo 42. South view, upland sample site 89. Agricultural field, near the southeastern boundary of PCA 10. Sample sites 92, and 114 are similar.



Photo 43. West view, wetland sample site 126, PCA 10. Atypical (mowed) wetland. This wetland site is hydrologically connected to the inundated portion of the cropped field (see background).



Photo 44. East view, wetland sample site 82, PCA 11. Unvegetated open water and banks of a constructed pond. Sample site 128 is similar, but with a sand beach/bottom.



Photo 45. East view, upland sample site 83. Mowed lawn on constructed berm adjacent to pond.



Photo 46. SW view, wetland sample site 133, PCA 12. Degraded sedge meadow. Sample site 85 is similar.



Photo 47. North view, wetland sample site 135, PCA 12. Fresh (wet) meadow. Sample site 138 is similar.



Photo 48. South view, wetland sample site 130, PCA 12. Fresh (wet) meadow with reed canary grass (*Phalaris arundinacea*) present. Sample site 129 is similar.



Photo 49. Wetland sample site 139, PCA 12. Fresh (wet) meadow degraded by dominant reed canary grass (*Phalaris arundinacea*). Small isolated wetland at the southeast end of this PCA.



Photo 50. NE view, upland sample site 132. Old field adjacent to PCA 12. Sample sites 86, 131, 134, and 137 are similar.



Photo 51. NW view, wetland sample site 98, PCA 13. Atypical (farmed) wetland, adjacent to a tributary to Spring Creek. Sample sites 95, 99, and 104 are similar.



Photo 52. SW view, upland sample site 100. Agricultural field just outside PCA 13. Sample site 103 is similar.



Photo 53. SE view, wetland sample site 101, PCA 14. Atypical (farmed) wetland.



Photo 54. SE view, upland sample site 102. Agricultural field adjacent to PCA 14.



Photo 55. Wetland sample site 73, PCA 15. Hardwood swamp on a low terrace along a tributary to Spring Creek



Photo 56. Wetland sample site 140, PCA 15. Hardwood swamp.



Photo 57. Wetland sample site 107, PCA 15. Fresh (wet) meadow with scattered lowland shrubs. Sample site 143 is similar.



Photo 58. East view wetland sample site 110, PCA 15. Atypical (farmed) wetland. Sample sites 108 and 112 are similar.



Photo 59. Upland sample site 74. Hardwoods on a dredge spoil pile near the tributary to Spring Creek. This site is on an upland "island" within wetland PCA 15.



Photo 60. Upland sample site 142. Old field within PCA 15. Upland sample site 141, near the southern end of PCA 15, is an undifferentiated thicket, similar to the background in this photo.



Photo 61. East view upland sample site 111. Agricultural field adjacent to PCA 15. Sample sites 109 and 113 are similar.



Photo 62. Wetland sample site 144, PCA 16. Spring run.



Photo 63. Wetland sample site 146, PCA 16. Spring hillside seep.



Photo 64. Spring head near sample site 146.



Photo 65. Wetland sample site 149, PCA 16. Hardwood swamp associated with nearby spring seeps.



Photo 66. Upland sample site 145. Hardwoods adjacent to the spring seeps/runs of PCA 16. Sample sites 147 and 148 are similar.



Photo 67. North view, middle section of wetland PCA 1. Includes sample sites 8 and 11.



Photo 68. South view, southern end of drainageway, wetland PCA 1.



Photo 69. SE/downstream view, unnamed tributary to Spring Creek, PCA 2. Taken from driveway crossing east of sample site 2. Smaller drainageway joins from the north/left.



Photo 70. West view, small drainageway, PCA 2, including sample site 13.



Photo 71. West view, inundated area, north end of wetland PCA 10.



Photo 72. SE view, southeastern end of wetland, PCA 10.



Photo 73. West view, constructed pond and overflow area, PCA 11.



Photo 74. NW/upstream view, standing on narrow upland berm near sample site 97. Wetland PCA 2, tributary to Spring Creek is on the right with wetland PCA 13 on the left.



Photo 75. South view, staked wetland PCA 14.



Photo 76. NE view, staked wetland boundary, PCA 15, in cropped area near sample site 110.






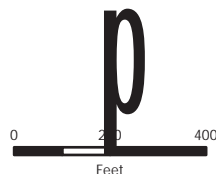
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Exhibit 10. NAIP/FSA Slide Review Area Map

Hickory Hill Farms, Inc.
N67 W25913 Silver Spring Drive
SW and SE Quarters, Section 21,
NW Quarter, Section 28. T8N-R19E
Village of Sussex, Waukesha County

Legend

-  Project Area
-  FSA Slide Review Area
-  FSA Slide Review Letter



Source: NAIP 2013
CA#734-208

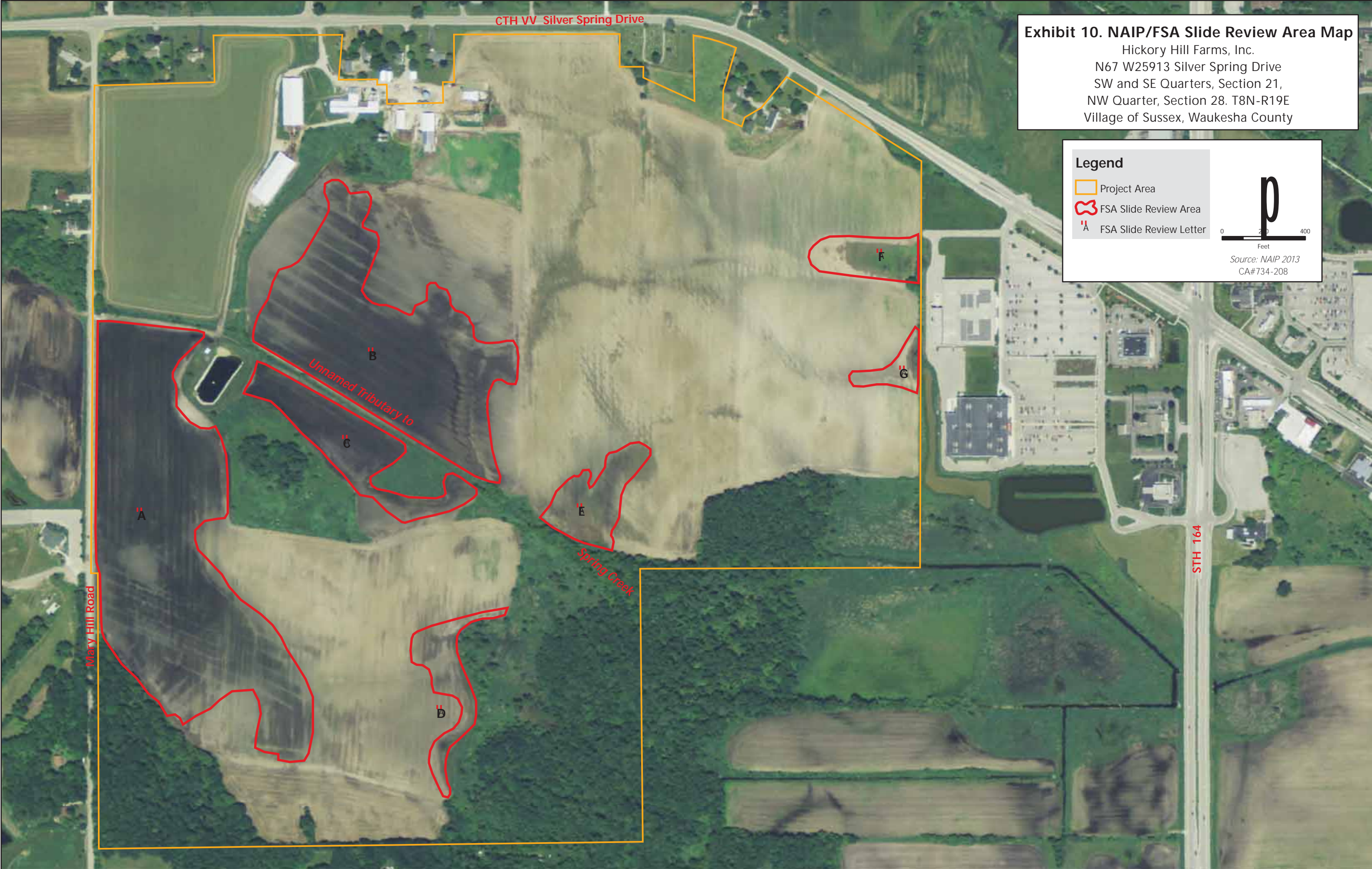


Exhibit 11. Wetland Hydrology from Aerial Imagery – Recording Form^a

Project Name: Hickory Hill Farms, Inc.

Date: 3-28-2019

County: Waukesha

Investigator: Chris Jors; SEWRPC

Legal Description (T, R, S): 0819 Sections 21 and 28

Summary Table

Date Image Taken (M-D-Y)	Image Source	Climate Condition (wet=3 normal=2 dry=1) ^b	Image Interpretation for Area(s)				
			Sample site(s):	A	B	C	D
			Soil Unit(s):				
			NRCS Inventory:	PC	PC	W	PC
			Landform:	depression	hillslope and toeslope	toeslope, low terrace	toeslope, depression
7-30-2017	NAIP	3		CS, DO (west)	CS, DO (SE)	CS, DO	CS, DO
9-22-2015	NAIP	3		CS (west); AP (east)	SS	CS	SS
6-19-2013	NAIP	3		SS	SS	SS	SS
7-1-2010	NAIP	3		CS	CS, DO	CS, DO	CS
7-5-2008	NAIP	2		CS, SW	CS, SW	CS, SW	NV
6-29-2006	NAIP	3		CS, SS	CS, SS, DO	CS, SS, DO	CS, DO
6-6-2005	NAIP	1		SS	SS	SS	SS-
August 2004	FSA	2		CS	CS	CS	CS, DO
June 2003	FSA	2		SS	SS	SS	NSS
2002	FSA	2		SS, SW	SS	SS, SW	SS-
June 2001	FSA	2		SS, WS	SS, WS	SS	SS-
June 2000	FSA	2		SS, SW	SS, SW	SS	SS
June 1999	FSA	3		SS	SS	NC, WS	SS-
June 1998	FSA	2		SS, SW	SS	NC, WS	SS-
June 1997	FSA	2		CS, SS	SS	NC, WS	SS
August 1996	FSA	2		NC, WS	CS, DO	NC, WS	DO, WS
June 1995	FSA	1		NC, WS, SS	SS	NC, WS	SS
1994	FSA	1		AP	CS	NC, WS	CS, DO
1993	FSA	3		AP, WS	CS	NC	CS
August 1992	FSA	1		CS, SS	CS	NC	SS
August 1991	FSA	2		CS	SS	NC	SS
Normal Climate Condition (10 years)				A	B	C	D
Number and % with wet signatures				10 (100%)	10 (100%)	10 (100%)	8 (80%)
All Climate Conditions (21 years)							
Number and % with wet signatures				21 (100%)	21 (100%)	21 (100%)	19 (95%)

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 the given month is assumed if the month is May or June, and the beginning of the month is assumed if the month is July, August, September, and October.

^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. (Oconomowoc, WI)

Exhibit 11. Wetland Hydrology from Aerial Imagery – Recording Form^a

Project Name: Hickory Hill Farms, Inc.

Date: 3-28-2019

County: Waukesha

Investigator: Chris Jors; SEWRPC

Legal Description (T, R, S): 0819 Sections 21 and 28

Summary Table

Date Image Taken (M-D-Y)	Image Source	Climate Condition (wet=3 normal=2 dry=1) ^b	Image Interpretation for Area(s)			
			Sample site(s): Soil Unit(s): NRCS Inventory: Landform:	E	F	G
				68-70 HmC2, Ph PC swale, depression	80 and 81 BsA PC swale, depression	77-79 Ph PC swale, depression
7-30-2017	NAIP	3		NV	DO, NC, SW	DO
9-22-2015	NAIP	3		SS	SS	SS
6-19-2013	NAIP	3		SS	CS, WS	SS
7-1-2010	NAIP	3		CS, DO	CS, DO, WS	CS, DO
7-5-2008	NAIP	2		WS	NC, WS	WS-
6-29-2006	NAIP	3		DO	DO, WS	CS, DO
6-6-2005	NAIP	1		SS-	SS	SS
August 2004	FSA	2		DO	AP, WS	NV
June 2003	FSA	2		SS-	SS-	SS-
2002	FSA	2		SS, WS	SS	SS
June 2001	FSA	2		SS, WS	SS-	SS
June 2000	FSA	2		SS	SS	SS
June 1999	FSA	3		SS, WS	SS-	SS
June 1998	FSA	2		SS, WS	NSS	SS
June 1997	FSA	2		SS, WS	SS	SS
August 1996	FSA	2		CS, WS	CS	DO
June 1995	FSA	1		SS, WS	SS-	SS
1994	FSA	1		CS, WS	NV	NV
1993	FSA	3		CS	WS	NV
August 1992	FSA	1		CS	CS	CS-
August 1991	FSA	2		SS	CS	CS
Normal Climate Condition (10 years)				Area: E	F	G
Number and % with wet signatures				10 (100%)	9 (90%)	9 (90%)
All Climate Conditions (21 years)						
Number and % with wet signatures				20 (95%)	19 (90%)	18 (86%)

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 the given month is assumed if the month is May or June, and the beginning of the month is assumed if the month is July, August, September, and October.

^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. (Oconomowoc, WI)

00251651

Exhibit 12. NAIP/FSA Images with Normal Antecedent Precipitation

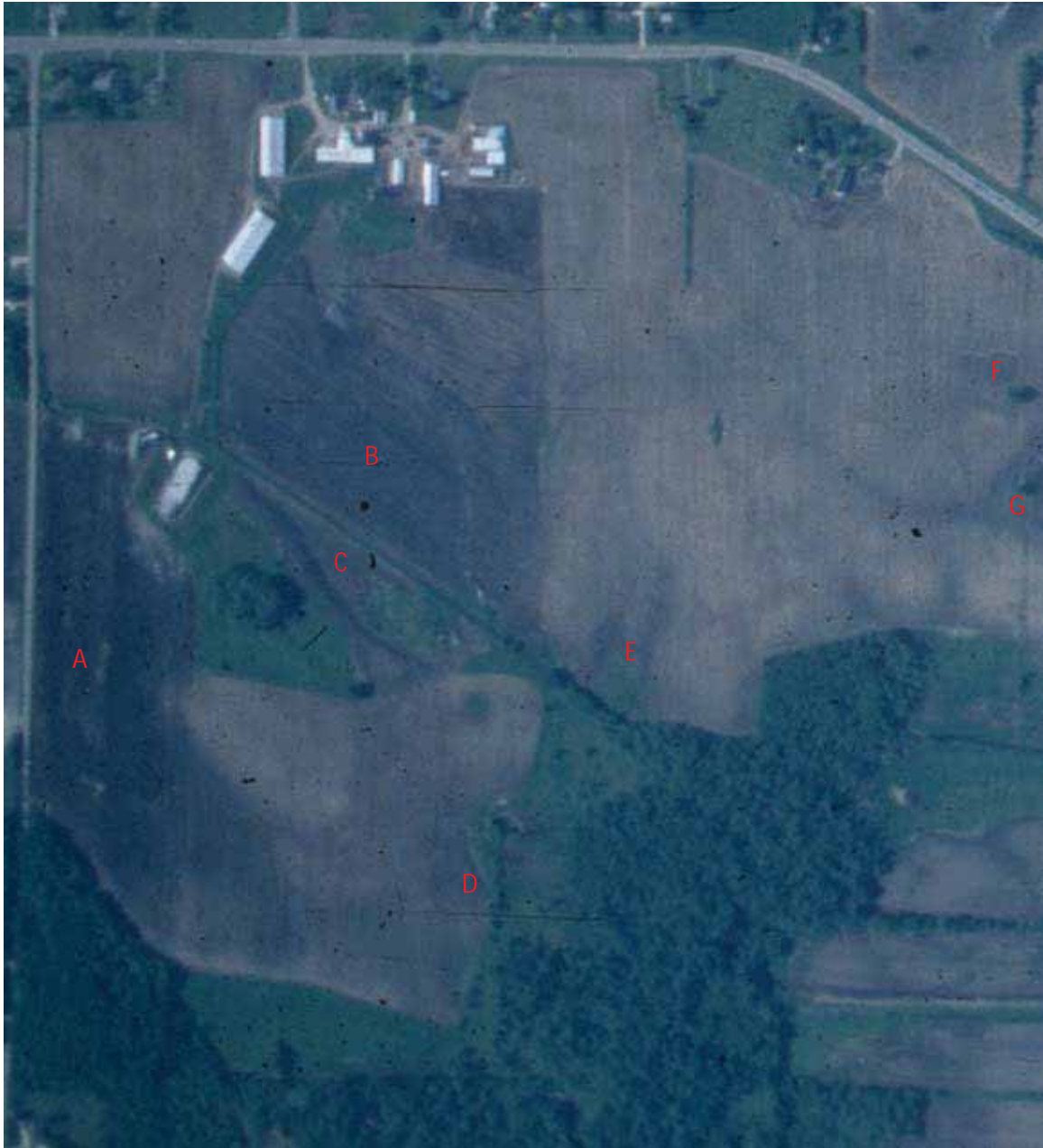
Hickory Hill Farms, Inc.
N67 W25913 Silver Spring Drive
SW and SE Quarters, Section 21, and
NW Quarter, Section 28, T8N, R19E
Village of Sussex, Waukesha County

NAIP Photo – July 5, 2008













FSA Slide – June 1998



FSA Slide – June 1997



FSA Slide – August 1996





Exhibit 13. NRCS Draft Wetland Inventory Map

Hickory Hill Farms, Inc.
N67 W25913 Silver Spring Drive
SW and SE Quarters, Section 21 and
NW Quarter, Section 28, T8N-R19E
Village of Sussex, Waukesha County

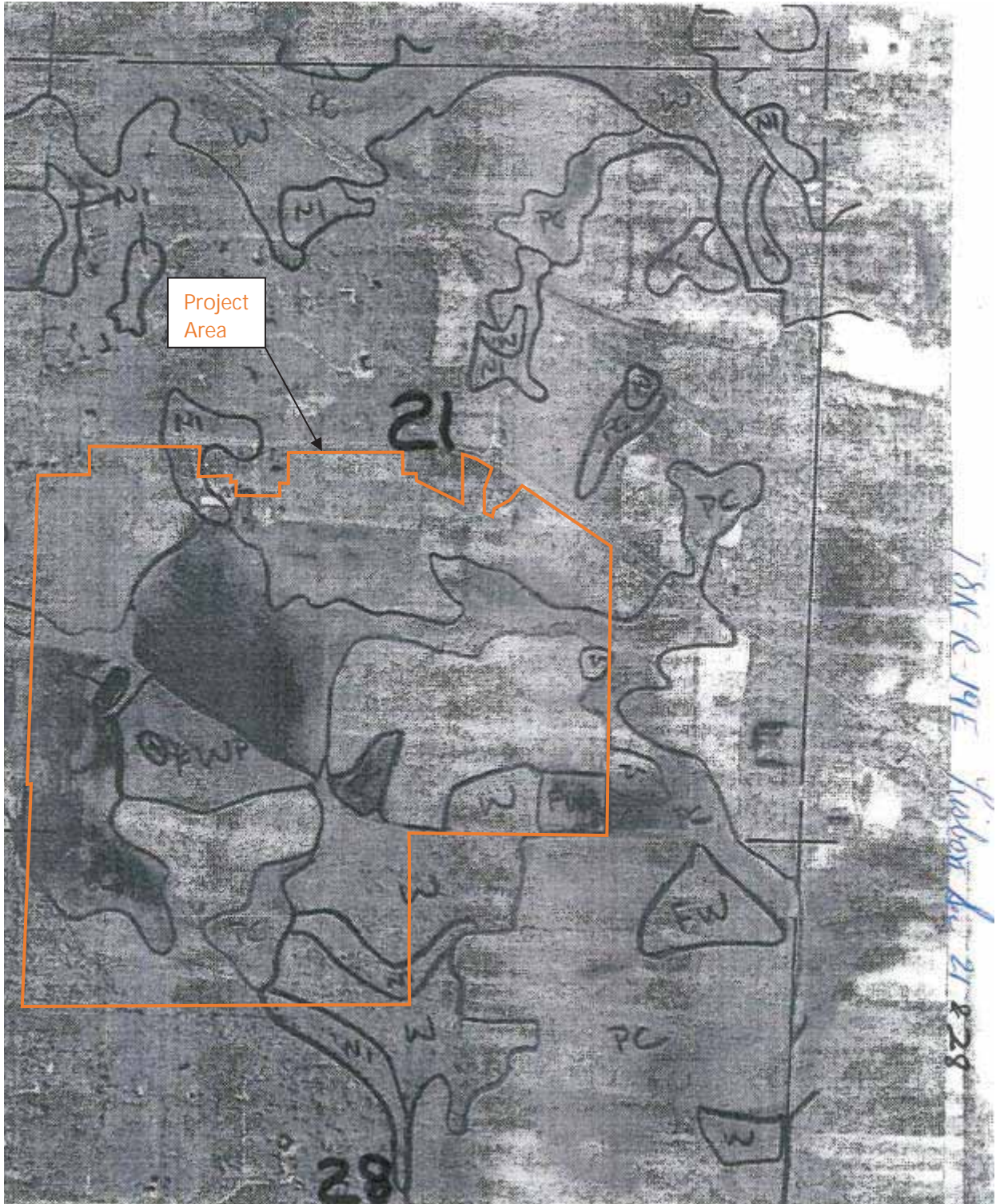

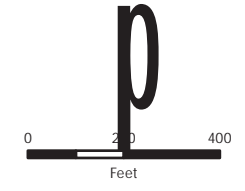


Exhibit 14. Recent Drain Tile Upgrades

Hickory Hill Farms, Inc.
N67 W25913 Silver Spring Drive
SW and SE Quarters, Section 21,
NW Quarter, Section 28. T8N-R19E
Village of Sussex, Waukesha County

Legend

 Project Area



Source: SEWRPC
Date of Photography: 2015
CA#734-208

