WETLAND DETERMINATION DATA FORM
Midwest Region

| Project/Site: | Emerald Park Landfill Expansion | Wetland ID: | Adj. to W2 | Sample Point | 2u |

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--		--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

		% Cover	Dominant	Ind.Status
1.	POA PRATENSIS	20	N	FAC
2.	PHALARIS ARUNDINACEA	30	Y	FACW
3.	DAUCUS CAROTA	30	Y	UPL
4.	TARAXACUM OFFICINALE	5	N	FACU
5.	BROMUS INERMIS	30	Y	UPL
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	115		

Woody Vine Stratum (Plot size: 30 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
	Total Cover =	0		

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: 33.3% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	30	x 2 =	60
FAC spp.	20	x 3 =	60
FACU spp.	5	x 4 =	20
UPL spp.	60	x 5 =	300
Total	115 (A)		440 (B)

Prevalence Index = B/A = 3.826

Hydrophytic Vegetation Indicators:

- ☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
- ☐ Yes ☑ No Dominance Test is > 50%
- ☐ Yes ☑ No Prevalence Index is ≤ 3.0 *
- ☐ Yes ☑ No Morphological Adaptations (Explain) *
- ☐ Yes ☑ No Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:
Upland old field.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: Emerald Park Landfill Expansion	Stantec Project #: 193702557	Date: 10/14/13
Applicant: ADS		County: Waukesha
Investigator #1: DP	Investigator #2: MC	State: Wisconsin
Soil Unit: Ogden muck	NWI/WWI Classification: Mzg	Wetland ID: W2
Landform: Depression	Local Relief: Concave	Sample Point: 2w
Slope (%): 0-2 Latitude: N/A	Longitude: N/A Datum: N/A	Community ID: wet meadow

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No   Section: 36

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?   Are normal circumstances present?   Township: 5N

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?   ☑ Yes ☐ No   Range: 20   Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present? ☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: Sample point is located in a wet meadow community. WETS analysis indicates drier than normal antecedent moisture conditions.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain)

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)	
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)	
Saturation Present?	☐ Yes	☑ No	Depth:	(in.)	

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 2007 NRC Delineation; 2009 concurrence

Remarks: The presence of 2 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Ogden muck   Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Medisaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Mottles Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	16	1	10YR 2/1	100	--	--	--	--	mucky loam
16	22	2	10YR 5/1	100	--	--	--	--	clay
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☑ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ F12 - Iron-Manganese Masses
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A Depth: N/A	Hydric Soil Present? ☑ Yes ☐ No

Remarks: First horizon has mucky modifyer when wet. The soil at the sample plot meets F1 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

WETLAND DETERMINATION DATA FORM
Midwest Region

| Project/Site: | Emerald Park Landfill Expansion | | | Wetland ID: | W2 | Sample Point | 2w |

VEGETATION   (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	PHALARIS ARUNDINACEA	40	Y	FACW
2.	Euthamia graminifolia	40	Y	FACW
3.	Aster lanceolatus	5	N	FAC
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	85		

Woody Vine Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
	Total Cover =	0		

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: 100.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	80	x 2 =	160
FAC spp.	5	x 3 =	15
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	85 (A)		175 (B)

Prevalence Index = B/A =   2.059

Hydrophytic Vegetation Indicators:

☑ Yes	☐ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☑ No	Morphological Adaptations (Explain) *
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Wet meadow community.

Stantec

Project/Site:	Emerald Park Landfill Expansion	Stantec Project #:	193702557	Date: 10/14/13
Applicant:	ADS			County: Waukesha
Investigator #1:	DP	Investigator #2: MC		State: Wisconsin
Soil Unit:	Ashkum silty clay loam	NWI/WWI Classification: N/A		Wetland ID: Adj. to W2
Landform:	Terrace	Local Relief: Convex		Sample Point: 3u
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Old field

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No		Section: 36
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?	Are normal circumstances present?	Township: 5N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?	☑ Yes ☐ No	Range: 20 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: WETS analysis indicates drier than normal antecedent moisture conditions. The sample point located on terrace, approx 3-4' above surface of wetland.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain)

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)	
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)	**Wetland Hydrology Present?** ☐ Yes ☑ No
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 2007 NRC Delineation; 2009 concurrence

Remarks: Soil pit dry to > 20". No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name: Ashkum silty clay loam	Series Drainage Class: poorly
Taxonomy (Subgroup): Typic Endoaquolls	

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Mottles Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 2/1	100	--	--	--	--	loam
8	20	2	2.5Y 5/2	99	2.5Y 5/6	1	C	M	clay loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ F12 - Iron-Manganese Masses
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A	Depth: N/A	**Hydric Soil Present?**	☐ Yes ☑ No

Remarks: Few redoximorphic features. Doesn't meet requirement of depleted matrix. No O^2 roots. The soil at the sample plot does not have any field indicators of hydric soil, nor does it appear to be inundated or saturated to the surface for long periods of time during the growing season in most years.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Emerald Park Landfill Expansion	Wetland ID:	Adj. to W2	Sample Point	3u

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--		--	--	--
3.	--		--	--	--
4.	--		--	--	--
5.	--		--	--	--
6.	--		--	--	--
7.	--		--	--	--
8.	--		--	--	--
9.	--		--	--	--
10.	--		--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Aster ericoides	40	Y	FACU
2.	MELILOTUS ALBUS	30	Y	UPL
3.	DAUCUS CAROTA	15	N	UPL
4.	SONCHUS ARVENSIS	10	N	FACU
5.	CIRSIUM ARVENSE	5	N	FACU
6	TARAXACUM OFFICINALE	5	N	FACU
7.	Solidago canadensis	5	N	FACU
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	110		

Woody Vine Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
	Total Cover =	0		

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: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	65	x 4 =	260
UPL spp.	45	x 5 =	225
Total	110 (A)		485 (B)

Prevalence Index = B/A = 4.409

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☐ Yes	☑ No	Dominance Test is > 50%
☐ Yes	☑ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☑ No	Morphological Adaptations (Explain) *
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Topography is abrupt.

WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Emerald Park Landfill Expansion	Stantec Project #: 193702557	Date: 10/14/13
Applicant: ADS		County: Waukesha
Investigator #1: DP	Investigator #2: MC	State: Wisconsin
Soil Unit: Muskego muck	NWI/WWI Classification: F0Kf	Wetland ID: W2
Landform: Depression	Local Relief: Concave	Sample Point: 3w
Slope (%): 0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Wet Meadow

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No | Section: 36

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? | Are normal circumstances present? | Township: 5N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? | ☑ Yes ☐ No | Range: 20 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present? ☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland? ☑ Yes ☐ No

Remarks: The sample plot is located in a wet meadow. WETS analysis indicates drier than normal antecedent moisture conditions.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain)

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 2007 NRC Delineation; 2009 concurrence

Remarks: The presence of 2 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Muskego muck | Series Drainage Class: very poorly

Taxonomy (Subgroup): Limnic Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Mottles Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 2/1	100	--	--	--	--	mucky loam
8	20	2	10YR 5/1	95	10YR 4/6	5	C	M	clay
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):

- ☐ A1 - Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☑ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ F12 - Iron-Manganese Masses
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A Depth: N/A | **Hydric Soil Present?** ☑ Yes ☐ No

Remarks: Does not match Muskego muck mapped soil characteristics of being a histosol.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Emerald Park Landfill Expansion	Wetland ID:	W2	Sample Point	3w

VEGETATION   (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--		--	--	--
3.	--		--	--	--
4.	--		--	--	--
5.	--		--	--	--
6.	--		--	--	--
7.	--		--	--	--
8.	--		--	--	--
9.	--		--	--	--
10.	--		--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

		% Cover	Dominant	Ind.Status
1.	PHALARIS ARUNDINACEA	100	Y	FACW
2.	CIRSIUM ARVENSE	1	N	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	101		

Woody Vine Stratum (Plot size: 30 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
	Total Cover =	0		

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: **100.0%**   (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	100	x 2 =	200
FAC spp.	0	x 3 =	0
FACU spp.	1	x 4 =	4
UPL spp.	0	x 5 =	0
Total	101 (A)		204 (B)

Prevalence Index = B/A =   **2.020**

Hydrophytic Vegetation Indicators:

☑ Yes	☐ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☑ No	Morphological Adaptations (Explain) *
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Depressional wet meadow community dominated by reed canary grass.

Project/Site: Emerald Park Landfill Expansion		Stantec Project #: 193702557	Date:	10/14/13
Applicant: ADS			County:	Waukesha
Investigator #1: DP	Investigator #2: MC		State:	Wisconsin
Soil Unit: Ogden muck		NWI/WWI Classification: E2Ka	Wetland ID:	W2
Landform: Depression	Local Relief: Concave		Sample Point:	4w
Slope (%): 0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: wet meadow

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No			Section: 36
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?	Are normal circumstances present?		Township: 5N
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?	☑ Yes ☐No		Range: 20 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Reed Canary grass dominated wet meadow on deep muck soils. WETS analysis indicates drier than normal antecedent moisture conditions.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain)

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)		
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)	**Wetland Hydrology Present?**	☑ Yes ☐ No
Saturation Present?	☑ Yes ☐ No	Depth:	(in.)		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 2007 NRC Delineation; 2009 concurrence

Remarks: The presence of 1 primary and 2 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Ogden muck	Series Drainage Class: very poorly
Taxonomy (Subgroup): Terric Medisaprists	

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Mottles Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	24	1	10YR 2/1	100	--	--	--	--	mucky loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☑ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ F12 - Iron-Manganese Masses
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A Depth: N/A	**Hydric Soil Present?** ☑ Yes ☐ No

Remarks: Deep mucky loam surface horizon. The soil at the sample plot meets F1 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Emerald Park Landfill Expansion		Wetland ID:	W2	Sample Point	4w

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

		% Cover	Dominant	Ind.Status
1.	PHALARIS ARUNDINACEA	60	Y	FACW
2.	TYPHA ANGUSTIFOLIA	20	Y	OBL
3.	Aster lanceolatus	20	Y	FAC
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	100		

Woody Vine Stratum (Plot size: 30 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
	Total Cover =	0		

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: __100.0%__ (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	20	x 1 =	20
FACW spp.	60	x 2 =	120
FAC spp.	20	x 3 =	60
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	100 (A)		200 (B)

Prevalence Index = B/A = __2.000__

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☑ No	Morphological Adaptations (Explain) *
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Project/Site:	Emerald Park Landfill Expansion	Stantec Project #: 193702557	Date: 10/14/13
Applicant:	ADS		County: Waukesha
Investigator #1: DP		Investigator #2: MC	State: Wisconsin
Soil Unit:	Ogden muck	NWI/WWI Classification: F0Kf	Wetland ID: W2
Landform:	Depression	Local Relief: Concave	Sample Point: 5W
Slope (%): 0-2	Latitude: N/A	Longitude: N/A Datum: N/A	Community ID: Wet Meadow

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)   ☐ Yes ☑ No | Section: 36

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?   Are normal circumstances present? | Township: 5N

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?   ☑ Yes ☐No | Range: 20   Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	**Is This Sampling Point Within A Wetland?**	**☑ Yes ☐ No**

Remarks: Area not plowed due to adjacency to a rock pile, so normal circumstances present. Surrounding area plowed and planted to soybean during the 2013 growing season. WETS analysis indicates drier than normal antecedent moisture conditions.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☑ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain)

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)	
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)	**Wetland Hydrology Present?** ☑ Yes ☐ No
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 2007 NRC Delineation; 2009 concurrence; FSA slides

Remarks: The presence of 1 primary and 2 secondary indicators at the sample plot provides evidence of wetland hydrology. FSA slide review indicates consistent signature within this farmed area.

SOILS

Map Unit Name: Ogden muck   Series Drainage Class: very poorly

Taxonomy (Subgroup):   Terric Medisaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Mottles Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 2/1	100	--	--	--	--	silty clay loam
8	20	2	10YR 5/1	85	10YR 4/6	15	C	M	clay
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ F12 - Iron-Manganese Masses
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: Clay Hardpan Depth: 8"	**Hydric Soil Present?** ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

| Project/Site: | Emerald Park Landfill Expansion | | Wetland ID: | W2 | Sample Point | 5W |

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--		--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--			--
5.	--			--
6.	--			--
7.	--			--
8.	--			--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Panicum capillare	80	Y	FAC
2.	DAUCUS CAROTA	5	N	UPL
3.	Amaranthus retroflexus	5	N	FACU
4.	SETARIA VIRIDIS	5	N	UPL
5.	TARAXACUM OFFICINALE	5	N	FACU
6	Ambrosia trifida	5	N	FAC
7.	MELILOTUS ALBUS	1	N	UPL
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	106		

Woody Vine Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
	Total Cover =	0		

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: **100.0%** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	85	x 3 =	255
FACU spp.	10	x 4 =	40
UPL spp.	11	x 5 =	55
Total	106 (A)		350 (B)

Prevalence Index = B/A = **3.302**

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☐ Yes	☑ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☐ No	Morphological Adaptations (Explain) *
☐ Yes	☐ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Dominant vegetation was determined through use of the 50/20 rule; vegetation at the sample plot is hydrophytic.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site:	Emerald Park Landfill Expansion	Stantec Project #: 193702557	Date: 10/14/13
Applicant:	ADS		County: Waukesha
Investigator #1: DP		Investigator #2: MC	State: Wisconsin
Soil Unit:	Ashkum silty clay loam	NWI/WWI Classification: N/A	Wetland ID: W3
Landform:	Depression	Local Relief: Concave	Sample Point: 1w
Slope (%): 0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: wet meadow

Are climatic/hydrologic conditions on the site typical for this time of year? *(If no, explain in remarks)* ☐ Yes ☑ No | Section: 36

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed? | Are normal circumstances present? | Township: 5N

Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic? | ☑ Yes ☐ No | Range: 20 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	**Is This Sampling Point Within A Wetland?**	■ Yes ■ No

Remarks: Closed depression. Surrounding area is gravel access roads. WETS analysis indicates drier than normal antecedent moisture conditions.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐)**:**

Primary:
- ☑ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☑ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain)

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)	
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)	**Wetland Hydrology Present?** ☑ Yes ☐ No
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 2007 NRC Delineation; 2009 concurrence

Remarks: The presence of 1 primary and 2 secondary indicators at the sample plot provides evidence of wetland hydrology.

SOILS

Map Unit Name: Ashkum silty clay loam	Series Drainage Class: poorly
Taxonomy (Subgroup): Typic Endoaquolls	

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Mottles Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR 4/3	100	--	--	--	--	silt loam
6	20	2	10YR 5/1	85	10YR 5/6	15	C	M	silty clay loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐)**:**

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ F12 - Iron-Manganese Masses
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A	Depth: N/A	**Hydric Soil Present?** ☑ Yes ☐ No

Remarks: The soil at the sample plot meets F3 Indicator described in the NRCS publication Field Indicators of Hydric Soil in the United States - version 7.0.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Emerald Park Landfill Expansion		Wetland ID:	W3	Sample Point	1w

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Salix bebbiana	15	Y	FACW
2.	Salix interior	10	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	25		

Herb Stratum (Plot size: 5 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Calamagrostis canadensis	40	Y	OBL
2.	TYPHA ANGUSTIFOLIA	25	Y	OBL
3.	Aster lanceolatus	20	N	FAC
4.	PHALARIS ARUNDINACEA	15	N	FACW
5.	Euthamia graminifolia	10	N	FACW
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	110		

Woody Vine Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: __4__ (A)

Total Number of Dominant Species Across All Strata: __4__ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: __100.0%__ (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	65	x 1 =	65
FACW spp.	50	x 2 =	100
FAC spp.	20	x 3 =	60
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	135 (A)		225 (B)

Prevalence Index = B/A = __1.667__

Hydrophytic Vegetation Indicators:

☑ Yes	☐ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☑ No	Morphological Adaptations (Explain) *
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Meets Rapid Test for hydrophytic vegetation, therefore hydrophytic vegetation is present.

Additional Remarks:

No upland sample point taken as the surrounding land is gravel access roads associated with existing landfill infrastructure. Topography is abrupt.

Project/Site:	Emerald Park Landfill Expansion		Stantec Project #:	193702557	Date:	10/14/13
Applicant:	ADS				County:	Waukesha
Investigator #1:	DP	Investigator #2: MC			State:	Wisconsin
Soil Unit:	Muskego muck		NWI/WWI Classification: F0Kf		Wetland ID:	Adj. to W4
Landform:	Rise	Local Relief: Convex			Sample Point:	1u
Slope (%):	0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID:	old field

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No | Section: 36

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? | Are normal circumstances present? | Township: 5N

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? | ☑ Yes ☐ No | Range: 20 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	**Is This Sampling Point Within A Wetland?**	■ Yes ☑ No

Remarks: Infiltation basin with excavated & graded soils. Mixed soil horizons. The sample plot is located in an old field.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain)

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)

Wetland Hydrology Present? ☐ Yes ☑ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 2007 NRC Delineation; 2009 concurrence

Remarks: No O^2 roots present. No evidence of wetland hydrology was observed at the sample plot.

SOILS

Map Unit Name:	Muskego muck	Series Drainage Class: very poorly
Taxonomy (Subgroup):	Limnic Haplosaprists	

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Mottles Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR 4/3	100	--	--	--	--	clay
6	20	2	10YR 4/3	50	--	--	--	--	clay
--	--	--	10YR 5/1	30	--	--	--	--	--
--	--	--	10YR 3/3	20	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ F12 - Iron-Manganese Masses
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A	Depth: N/A	**Hydric Soil Present?** ☐ Yes ☑ No

Remarks: Depleted matrix component of horizon 2 is approx. 30%. 60% or more of chroma 2 or less is required for depleted matrix.

WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site:	Emerald Park Landfill Expansion	Wetland ID:	Adj. to W4	Sample Point	1u

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--		--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

		% Cover	Dominant	Ind.Status
1.	POA PRATENSIS	40	Y	FAC
2.	MELILOTUS ALBUS	20	Y	UPL
3.	MEDICAGO SATIVA	20	Y	FACU
4.	Solidago canadensis	15	N	FACU
5.	PHALARIS ARUNDINACEA	5	N	FACW
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	100		

Woody Vine Stratum (Plot size: 30 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
	Total Cover =	0		

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: **33.3%** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	5	x 2 =	10
FAC spp.	40	x 3 =	120
FACU spp.	35	x 4 =	140
UPL spp.	20	x 5 =	100
Total	100 (A)		370 (B)

Prevalence Index = B/A = **3.700**

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☐ Yes	☑ No	Dominance Test is > 50%
☐ Yes	☑ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☑ No	Morphological Adaptations (Explain) *
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is not hydrophytic.

Additional Remarks:

Slight rise above wetland swale within infiltration basin.

WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site:	Emerald Park Landfill Expansion	Stantec Project #: 193702557	Date: 10/14/13
Applicant:	ADS		County: Waukesha
Investigator #1: DP		Investigator #2: MC	State: Wisconsin
Soil Unit: Saylesville silt loam		NWI/WWI Classification: N/A	Wetland ID: W4
Landform: Basin		Local Relief: Concave	Sample Point: 1W
Slope (%): 0-2	Latitude: N/A	Longitude: N/A Datum: N/A	Community ID: Wet Meadow

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No   Section: 36

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?   Are normal circumstances present?   Township: 5N

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?   ☑ Yes ☐ No   Range: 20   Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	**Is This Sampling Point Within A Wetland?**	**☑ Yes ☐ No**

Remarks: Sample point taken within constructed infiltration basin. Culvert inlet and outlet are present. WETS analysis indicates drier than normal antecedent moisture conditions. Infiltration/storm-water basin, so potential non-jurisdictional created wetland.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☑ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain)

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

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)	
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)	
Saturation Present?	☑ Yes	☐ No	Depth: 4	(in.)	

Wetland Hydrology Present?   ☑ Yes ☐ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 2007 NRC Delineation; 2009 concurrence

Remarks: Perched hydrology above clay soils in horizon 2.

SOILS

Map Unit Name: Saylesville silt loam   Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Hapludalfs

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Mottles Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 3/2	100	--	--	--	--	silt
4	20	2	10YR 5/1	90	--	--	--	--	clay
--	--	--	10YR 4/3	10	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ F12 - Iron-Manganese Masses
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: Clay Depth: 4"	**Hydric Soil Present?**	☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Emerald Park Landfill Expansion		Wetland ID:	W4	Sample Point	1W

VEGETATION　(Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--		--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Populus deltoides	5	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--			--
5.	--			--
6.	--			--
7.	--			--
8.	--			--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	5		

Herb Stratum (Plot size: 5 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	PHALARIS ARUNDINACEA	100	Y	FACW
2.	Aster lanceolatus	5	N	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	105		

Woody Vine Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
	Total Cover =	0		

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: **100.0%** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	100	x 2 =	200
FAC spp.	10	x 3 =	30
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	110 (A)		230 (B)

Prevalence Index = B/A = **2.091**

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☑ No	Morphological Adaptations (Explain) *
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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:　Dominant vegetation was determined through use of the 50/20 rule and Prevalence Index. Vegetation at the sample plot is hydrophytic.

Additional Remarks:

Sample point taken within infiltration basin.

WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Emerald Park Landfill Expansion		Stantec Project #: 193702557	Date: 10/14/13
Applicant: ADS			County: Waukesha
Investigator #1: DP	Investigator #2: MC		State: Wisconsin
Soil Unit: Martinton silt loam		NWI/WWI Classification: N/A	Wetland ID: N/A
Landform: Depression	Local Relief: Concave		Sample Point: 5-1
Slope (%): 0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Cropland

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☐ Yes ☑ No | Section: 36

Are Vegetation ☑ , Soil ☐ , or Hydrology ☐ significantly disturbed? | Township: 5N

Are normal circumstances present?

Are Vegetation ☐ , Soil ☐ , or Hydrology ☑ naturally problematic? | ☐ Yes ☑ No | Range: 20 Dir: E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present? ☐ Yes ☑ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: WETS analysis indicates site conditions drier than normal. Depression in soybean field, crop may have been drowned out shortly after planting. Potential problematic seasonal wetland interpreted to be non-wetland based on soils and vegetation indicators.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

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

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

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth: (in.)	
Water Table Present?	☐ Yes ☑ No	Depth: (in.)	**Wetland Hydrology Present?** ☑ Yes ☐ No
Saturation Present?	☑ Yes ☐ No	Depth: 12 (in.)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 2007 NRC Delineation; 2009 concurrence; FSA Slides

Remarks: FSA slide review remarks at bottom of data form. The A3 indicator is barely within the threshold and saturation in silty clay is often difficult to discern. Surface soil cracks may have formed from a heavy rain event even if the depressional area drained.

SOILS

Map Unit Name: Martinton silt loam | Series Drainage Class: somewhat poorly

Taxonomy (Subgroup): Aquic Argiudolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Mottles Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	12	1	10YR 3/1	100	--	--	--	--	silty clay loam
12	24	2	10YR 5/1	100	--	--	--	--	silty clay
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat
- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ F12 - Iron-Manganese Masses
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: Clay	Depth: 4"	**Hydric Soil Present?** ☐ Yes ☑ No

Remarks: Depleted matrix below 12". The soil at the sample point does not meet the A12 Indicator because the value is too high in the 1st horizon.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Emerald Park Landfill Expansion				Wetland ID:	N/A	Sample Point	5-1

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Panicum capillare	15	Y	FAC
2.	CHENOPODIUM ALBUM	15	Y	FACU
3.	Ambrosia trifida	15	Y	FAC
4.	SETARIA VIRIDIS	15	Y	UPL
5.	Echinochloa crus-galli	10	N	FACW
6	Amaranthus retroflexus	10	N	FACU
7.	ABUTILON THEOPHRASTI	5	N	FACU
8.	Cyperus esculentus	5	N	FACW
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	90		

Woody Vine Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
5.	--	--	--	--
4.	--	--	--	--
	Total Cover =	0		

Dominance Test Worksheet

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

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	15	x 2 =	30
FAC spp.	30	x 3 =	90
FACU spp.	30	x 4 =	120
UPL spp.	15	x 5 =	75
Total	90 (A)		315 (B)

Prevalence Index = B/A = 3.500

Hydrophytic Vegetation Indicators:

☐ Yes ☑ No	Rapid Test for Hydrophytic Vegetation
☐ Yes ☑ No	Dominance Test is > 50%
☐ Yes ☑ No	Prevalence Index is ≤ 3.0 *
☐ Yes ☑ No	Morphological Adaptations (Explain) *
☐ Yes ☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Apparently no soybean germination. Timing of planting may have resulted in crops being drowned out. Dominant vegetation was determined through use of the 50/20 rule. Vegetation at the sample plot is non-hydrophytic.

Additional Remarks:

This point is located in an area that was reviewed in the FSA slide review and it was noted that this depression showed a signature in only one out of the six most recent normal precipitation years (precipitation data interpreted using the 3 months prior to the crop slide photo being taken in each year).

Stantec

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: Emerald Park Landfill - Western Expansion	Stantec Project #: 193702557	Date: 10/23/14
Applicant: Advanced Disposal Services, INC		County: Waukesha
Investigator #1: Eric Parker	Investigator #2: Jaron Tylock	State: Wisconsin
Soil Unit: Saylesville silt loam	NWI/WWI Classification: N/A	Wetland ID: Adj to W1
Landform: Hill Slope	Local Relief: Convex	Sample Point: W1-7u
Slope (%): 2-4 Latitude: N/A Longitude: N/A Datum: N/A		Community ID: Agricultural Hay Field
Are climatic/hydrologic conditions on the site typical for this time of year? (If not, explain in remarks) ☑ Yes ☐ No		Section: 36
Are Vegetation ☑, Soil ☑, or Hydrology ☐ significantly disturbed?	Are normal circumstances present?	Township: 5 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?	☐ Yes ☑ No	Range: 20 E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Antecedent moisture conditions normal based on WETS analysis. Point located in an agricultural field with potential hydrological manipulations. Normal circumstances assumed not present.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ E6 - Surface Soil Cracks
- ☐ E10 - Drainage Patterns
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)	
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)	**Wetland Hydrology Present?** ☐ Yes ☑ No
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)	

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

Remarks: No hydrology indicators were observed. FSA slides indicated uplands in this location. Convex slope with sample point several feet higher in elevation than adjacent wetland.

SOILS

Map Unit Name: Saylesville silt loam	Series Drainage Class: moderately well to well
Taxonomy (Subgroup): Typic Hapludalfs	

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Redox Features Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	4	1	10YR 3/2	100	--	--	--	--	loam
4	24	2	10YR 3/2	95	10YR 5/1	3	D	M	silt loam
--	--	--	--	--	10YR 5/3	2	C	M	silt loam
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ S7 - Dark Surface
- ☐ F12 - Iron-Manganese Masses
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A	Depth: N/A	**Hydric Soil Present?** ☐ Yes ☑ No

Remarks: Does not meet criteria for F6 or F7.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Emerald Park Landfill - Western Expansion	Wetland ID:	Adj to W1	Sample Point	W1-7u

VEGETATION　(Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	SCHEDONORUS ARUNDINACEUS	95	Y	FACU
2.	TRIFOLIUM PRATENSE	20	N	FACU
3.	TARAXACUM OFFICINALE	5	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	120		

Woody Vine Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

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:　0.0%　(A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	120	x 4 =	480
UPL spp.	0	x 5 =	0
Total	120　(A)		480　(B)

Prevalence Index = B/A = 　4.000

Hydrophytic Vegetation Indicators:

☐ Yes ☑ No	Rapid Test for Hydrophytic Vegetation
☐ Yes ☑ No	Dominance Test is > 50%
☐ Yes ☑ No	Prevalence Index is ≤ 3.0 *
☐ Yes ☑ No	Morphological Adaptations (Explain) *
☐ Yes ☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Sample point located in a hay field, vegetation shows evidence of periodic mowing.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Emerald Park Landfill - Western Expansion	Stantec Project #: 193702557	Date: 10/23/14
Applicant: Advanced Disposal Services, INC		County: Waukesha
Investigator #1: Eric Parker	Investigator #2: Jaron Tylock	State: Wisconsin

Soil Unit: Saylesville silt loam	NWI/WWI Classification: T3/E2Ka	Wetland ID: W1
Landform: Depression	Local Relief: Concave	Sample Point: W1-7w
Slope (%): 0-2	Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Shrub Carr

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No — Section: 36

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? | Are normal circumstances present? — Township: 5 N

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? ☑ Yes ☐ No — Range: 20 E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Antecedent moisture conditions normal based on WETS analysis. Point located in a shrubby portion of a wetland complex.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☑ A1 - Surface Water
- ☑ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ B6 - Surface Soil Cracks
- ☐ E10 - Drainage Patterns
- ☑ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☑ Yes ☐ No	Depth: 2 (in.)		
Water Table Present?	☑ Yes ☐ No	Depth: 6 (in.)	**Wetland Hydrology Present?**	☑ Yes ☐ No
Saturation Present?	☑ Yes ☐ No	Depth: 0 (in.)		

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

Remarks: Depressional

SOILS

Map Unit Name: Saylesville silt loam — Series Drainage Class: moderately well to well

Taxonomy (Subgroup): Typic Hapludalfs

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Redox Features Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 3/1	95	10YR 5/6	5	C	M	silt loam
8	18	2	10YR 4/2	95	10YR 5/6	5	C	M	silt loam
18	24	3	10YR 5/1	95	10YR 5/6	5	C	M	silty clay
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ S7 - Dark Surface
- ☐ F12 - Iron-Manganese Masses
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A	Depth: N/A	**Hydric Soil Present?** ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Emerald Park Landfill - Western Expansion	Wetland ID:	W1	Sample Point	W1-7w

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Populus deltoides	10	Y	FAC
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	10		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Salix interior	40	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	40		

Herb Stratum (Plot size: 5 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	PHALARIS ARUNDINACEA	45	Y	FACW
2.	Spartina pectinata	35	Y	FACW
3.	Symphyotrichum lanceolatum	5	N	FAC
4.	Asclepias incarnata	1	N	OBL
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	86		

Woody Vine Stratum (Plot size: 30 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 4   (A)

Total Number of Dominant Species Across All Strata: 4   (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0%   (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	1	x 1 =	1
FACW spp.	120	x 2 =	240
FAC spp.	15	x 3 =	45
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	136 (A)		286 (B)

Prevalence Index = B/A =   2.103

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☑ No	Morphological Adaptations (Explain) *
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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:

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site:	Emerald Park Landfill - Western Expansion	Stantec Project #: 193702557	Date:	10/17/14
Applicant:	Advanced Disposal Services, INC		County:	Waukesha
Investigator #1: Eric Parker		Investigator #2: Melissa Curran	State:	Wisconsin
Soil Unit:	Ashkum silt loam	NWI/WWI Classification: N/A	Wetland ID:	Adj to W2
Landform:	Hill Slope	Local Relief: Convex	Sample Point:	W2-4u
Slope (%): 2-3	Latitude: N/A	Longitude: N/A Datum: N/A	Community ID:	Old Field

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)	☑ Yes ☐ No	Section: 36
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ significantly disturbed?	Are normal circumstances present?	Township: 5 N
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic?	☑ Yes ☐No	Range: 20 E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☐ Yes ☑ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Antecedent moisture conditions normal based on WETS analysis.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ E6 - Surface Soil Cracks
- ☐ E10 - Drainage Patterns
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)	
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)	**Wetland Hydrology Present?** ☐ Yes ☑ No
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)	

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

Remarks: No hydrology indicators were observed.

SOILS

Map Unit Name: Ashkum silt loam	Series Drainage Class: poorly
Taxonomy (Subgroup): Typic Endoaquolls	

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Redox Features Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	13	1	10YR 3/1	100	--	--	--	--	silty clay loam
13	24	2	2.5Y 6/2	70	10YR 3/6	30	C	M	silty clay
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☑):

- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ S7 - Dark Surface
- ☐ F12 - Iron-Manganese Masses
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A Depth: N/A	**Hydric Soil Present?** ☐ Yes ☑ No

Remarks: Soil potentially excavated with non-native topsoil deposited. Close to meeting A12, however seemingly artificial profile.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Emerald Park Landfill - Western Expansion				Wetland ID:	Adj to W2	Sample Point	W2-4u

VEGETATION   (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

		% Cover	Dominant	Ind.Status
1.	POA COMPRESSA	75	Y	FACU
2.	Solidago canadensis	15	N	FACU
3.	DAUCUS CAROTA	10	N	UPL
4.	TARAXACUM OFFICINALE	5	N	FACU
5.	Erigeron annuus	5	N	FACU
6	TRIFOLIUM PRATENSE	5	N	FACU
7.	PHALARIS ARUNDINACEA	1	N	FACW
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	116		

Woody Vine Stratum (Plot size: 30 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

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: 0.0% (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	1	x 2 =	2
FAC spp.	0	x 3 =	0
FACU spp.	105	x 4 =	420
UPL spp.	10	x 5 =	50
Total	116 (A)		472 (B)

Prevalence Index = B/A = 4.069

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☐ Yes	☑ No	Dominance Test is > 50%
☐ Yes	☑ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☑ No	Morphological Adaptations (Explain) *
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Sample point contained typical old field vegetation.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Emerald Park Landfill - Western Expansion	Stantec Project #: 193702557	Date: 10/17/14
Applicant: Advanced Disposal Services, INC		County: Waukesha
Investigator #1: Eric Parker	Investigator #2: Melissa Curran	State: Wisconsin
Soil Unit: Ogden muck	NWI/WWI Classification: F0Kf	Wetland ID: Adj to W2
Landform: Crest	Local Relief: Convex	Sample Point: W2-5u
Slope (%): 2-4 Latitude: N/A	Longitude: N/A Datum: N/A	Community ID: Agricultural Field

Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No		Section: 36
Are Vegetation ☑, Soil ☑, or Hydrology ☐ significantly disturbed?	Are normal circumstances present?	Township: 5 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?	☐ Yes ☑ No	Range: 20 E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☐ Yes ☑ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland?	☐ Yes ☑ No

Remarks: Antecedent moisture conditions normal based on WETS analysis. Point located in an agricultural field with potential hydrological manipulations - rockpiles present near point and straight to north, potentially marking field tiles. Normal circumstances interpreted to not be present. FSA slides show consistent non-wetland signature in this small agricultural field surrounded by wetlands.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☑):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ E6 - Surface Soil Cracks
- ☐ E10 - Drainage Patterns
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☐ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)	
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)	**Wetland Hydrology Present?** ☐ Yes ☑ No
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)	

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

Remarks: No hydrology indicators were observed. Point located on convex topographic lens approximately 4 feet above surrounding wetland. FSA slides indicate uplands in this area.

SOILS

Map Unit Name: Ogden muck   Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Medisaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Redox Features Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR 3/1	100	--	--	--	--	silty clay loam
6	18	2	2.5Y 5/2	90	10YR 4/6	10	C	M	silty clay
18	24	3	2.5Y 6/2	80	10YR 4/6	20	C	M	clay
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ S7 - Dark Surface
- ☐ F12 - Iron-Manganese Masses
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A Depth: N/A	**Hydric Soil Present?**	☑ Yes ☐ No

Remarks: Soils are not organic as soil survey indicates. Soil profile dry throughout.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Emerald Park Landfill - Western Expansion	Wetland ID:	Adj to W2	Sample Point	W2-5u

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	GLYCINE MAX	50	Y	UPL
2.	TARAXACUM OFFICINALE	15	Y	FACU
3.	TRIFOLIUM PRATENSE	3	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	68		

Woody Vine Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

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: **0.0%** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	0	x 2 =	0
FAC spp.	0	x 3 =	0
FACU spp.	18	x 4 =	72
UPL spp.	50	x 5 =	250
Total	68 (A)		322 (B)

Prevalence Index = B/A = **4.735**

Hydrophytic Vegetation Indicators:

☐ Yes ☑ No	Rapid Test for Hydrophytic Vegetation
☐ Yes ☑ No	Dominance Test is > 50%
☐ Yes ☑ No	Prevalence Index is ≤ 3.0 *
☐ Yes ☑ No	Morphological Adaptations (Explain) *
☐ Yes ☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Healthy soybean crop observed at this location in 2013 and 2014; this and cover estimated based on stubble.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: Emerald Park Landfill - Western Expansion	Stantec Project #: 193702557	Date: 10/17/14
Applicant: Advanced Disposal Services, INC		County: Waukesha
Investigator #1: Eric Parker	Investigator #2: Melissa Curran	State: Wisconsin
Soil Unit: Ogden muck	NWI/WWI Classification: F0Kf	Wetland ID: W2
Landform: Toeslope	Local Relief: Concave	Sample Point: W2-5W
Slope (%): 1-2 Latitude: N/A Longitude: N/A Datum: N/A		Community ID: Wet Meadow
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No		Section: 36
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are normal circumstances present?		Township: 5 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? ☑ Yes ☐ No		Range: 20 E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Antecedent moisture conditions normal based on WETS analysis. Sample point located near the edge of active soybean field with Phalaris wet meadow nearby. Stubble provided evidence of crop stress. Normal circumstances interpreted to be present.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:		Secondary:
☐ A1 - Surface Water	☐ B9 - Water-Stained Leaves	☐ E6 - Surface Soil Cracks
☐ A2 - High Water Table	☐ B13 - Aquatic Fauna	☐ E10 - Drainage Patterns
☑ A3 - Saturation	☐ B14 - True Aquatic Plants	☐ C2 - Dry-Season Water Table
☐ B1 - Water Marks	☐ C1 - Hydrogen Sulfide Odor	☐ C8 - Crayfish Burrows
☐ B2 - Sediment Deposits	☐ C3 - Oxidized Rhizospheres on Living Roots	☑ C9 - Saturation Visible on Aerial Imagery
☐ B3 - Drift Deposits	☐ C4 - Presence of Reduced Iron	☑ D1 - Stunted or Stressed Plants
☐ B4 - Algal Mat or Crust	☐ C6 - Recent Iron Reduction in Tilled Soils	☑ D2 - Geomorphic Position
☐ B5 - Iron Deposits	☐ C7 - Thin Muck Surface	☑ D5 - FAC-Neutral Test
☐ B7 - Inundation Visible on Aerial Imagery	☐ D9 - Gauge or Well Data	
☐ B8 - Sparsely Vegetated Concave Surface	☐ Other (Explain in Remarks)	

Field Observations:

Surface Water Present?	☐ Yes	☑ No	Depth:	(in.)		
Water Table Present?	☐ Yes	☑ No	Depth:	(in.)	Wetland Hydrology Present?	☑ Yes ☐ No
Saturation Present?	☑ Yes	☐ No	Depth: 0	(in.)		

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

Remarks: FSA slides show consistent wetland hydrology signatures surrounding adjacent small upland ag field (represented by this sample point).

SOILS

Map Unit Name: Ogden muck   Series Drainage Class: very poorly

Taxonomy (Subgroup): Terric Medisaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Redox Features Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	13	1	10YR 2/1	100	--	--	--	--	muck
13	22	2	2.5Y 6/2	70	10YR 3/6	30	C	M	silty clay
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):

		Indicators for Problematic Soils [1]
☐ A1- Histosol	☐ S4 - Sandy Gleyed Matrix	☐ A16 - Coast Prairie Redox
☑ A2 - Histic Epipedon	☐ S5 - Sandy Redox	☐ S7 - Dark Surface
☑ A3 - Black Histic	☐ S6 - Stripped Matrix	☐ F12 - Iron-Manganese Masses
☐ A4 - Hydrogen Sulfide	☐ F1 - Loamy Muck Mineral	☐ TF12 - Very Shallow Dark Surface
☐ A5 - Stratified Layers	☐ F2 - Loamy Gleyed Matrix	☐ Other (Explain in Remarks)
☐ A10 - 2 cm Muck	☐ F3 - Depleted Matrix	
☐ A11 - Depleted Below Dark Surface	☐ F6 - Redox Dark Surface	
☑ A12 - Thick Dark Surface	☐ F7 - Depleted Dark Surface	
☐ S1 - Sandy Muck Mineral	☐ F8 - Redox Depressions	
☐ S3 - 5 cm Mucky Peat or Peat		[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A	Depth: N/A	Hydric Soil Present? ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Emerald Park Landfill - Western Expansion	Wetland ID:	W2	Sample Point	W2-5W

VEGETATION   (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--		--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

		% Cover	Dominant	Ind.Status
1.	PHALARIS ARUNDINACEA	5	Y	FACW
2.	ECHINOCHLOA CRUS-GALLI	5	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	10		

Woody Vine Stratum (Plot size: 30 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

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: **100.0%** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	0	x 3 =	0
FACU spp.	0	x 4 =	0
UPL spp.	0	x 5 =	0
Total	10 (A)		20 (B)

Prevalence Index = B/A =   **2.000**

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☑ No	Morphological Adaptations (Explain) *
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Sparse vegetation and nearby soybean stubble indicate crop stress in this part of the agricultural field. Soybeans recently harvested. Nearby but outside the field, Phalaris dominates.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Emerald Park Landfill - Western Expansion		Stantec Project #: 193702557	Date: 10/17/14
Applicant: Advanced Disposal Services, INC			County: Waukesha
Investigator #1: Eric Parker	Investigator #2: Melissa Curran		State: Wisconsin
Soil Unit: Montgomery silty clay	NWI/WWI Classification: E2Ka		Wetland ID: W2
Landform: Hill Slope	Local Relief: Concave		Sample Point: W2-6w
Slope (%): 1-2 Latitude: N/A	Longitude: N/A	Datum: N/A	Community ID: Wet Meadow
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No			Section: 36
Are Vegetation ☐, Soil ☑, or Hydrology ☐ significantly disturbed?	Are normal circumstances present?		Township: 5 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?	☑ Yes ☐ No		Range: 20 E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: Antecedent moisture conditions normal based on WETS analysis. Soils significantly disturbed due to fill material incorporated in the profile.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ E6 - Surface Soil Cracks
- ☐ E10 - Drainage Patterns
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)	
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)	**Wetland Hydrology Present?** ☑ Yes ☐ No
Saturation Present?	☑ Yes ☐ No	Depth: 24	(in.)	

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

Remarks: Marginal wetland hydrology, but interpreted to be met based on two secondary indicators and professional judgment.

SOILS

Map Unit Name: Montgomery silty clay	Series Drainage Class: very poorly
Taxonomy (Subgroup): Vertic Endoaquolls	

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Redox Features Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	6	1	10YR 2/1	98	10YR 4/4	2	C	M	silty clay loam
6	12	2	10YR 3/1	100	--	--	--	--	silty clay loam
12	24	3	10YR 3/1	95	10YR 4/4	5	C	M	silty clay loam
24	27	4	10YR 2/1	100	--	--	--	--	muck
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):

- ☐ A1 - Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ S7 - Dark Surface
- ☐ F12 - Iron-Manganese Masses
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A	Depth: N/A	**Hydric Soil Present?** ☑ Yes ☐ No

Remarks: F6 is met, however soils appear to possess fill in the upper 24 inches.

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site:	Emerald Park Landfill - Western Expansion		Wetland ID:	W2	Sample Point	W2-6w

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--		--	--	--
3.	--		--	--	--
4.	--		--	--	--
5.	--		--	--	--
6.	--		--	--	--
7.	--		--	--	--
8.	--		--	--	--
9.	--		--	--	--
10.	--		--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	Salix discolor	5	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	5		

Herb Stratum (Plot size: 5 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	PHALARIS ARUNDINACEA	100	Y	FACW
2.	Solidago gigantea	1	N	FACW
3.	Symphyotrichum lanceolatum	1	N	FAC
4.	CIRSIUM ARVENSE	1	N	FACU
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	103		

Woody Vine Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

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: __100.0%__ (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	106	x 2 =	212
FAC spp.	1	x 3 =	3
FACU spp.	1	x 4 =	4
UPL spp.	0	x 5 =	0
Total	108 (A)		219 (B)

Prevalence Index = B/A = __2.028__

Hydrophytic Vegetation Indicators:

☑ Yes	☐ No	Rapid Test for Hydrophytic Vegetation	
☑ Yes	☐ No	Dominance Test is > 50%	
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *	
☐ Yes	☑ No	Morphological Adaptations (Explain) *	
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *	

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Sample point is located in a low quality wet meadow community.

Additional Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Stantec

Project/Site: Emerald Park Landfill - Western Expansion	Stantec Project #: 193702557	Date: 10/17/14
Applicant: Advanced Disposal Services, INC		County: Waukesha
Investigator #1: Eric Parker	Investigator #2: Melissa Curran	State: Wisconsin
Soil Unit: Muskego muck	NWI/WWI Classification: F0Kf	Wetland ID: W2
Landform: Backslope	Local Relief: Concave	Sample Point: W2-7w
Slope (%): 1-2 Latitude: N/A Longitude: N/A Datum: N/A		Community ID: Wet Meadow
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No		Section: 36
Are Vegetation ☑, Soil ☐, or Hydrology ☐ significantly disturbed? Are normal circumstances present?		Township: 5 N
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? ☑ Yes ☐No		Range: 20 E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present?	☑ Yes ☐ No
Wetland Hydrology Present?	☑ Yes ☐ No	Is This Sampling Point Within A Wetland?	☑ Yes ☐ No

Remarks: WETS analysis indicates normal antecedent moisture conditions. Wet meadow community within a hay field. Vegetation significantly disturbed due to recent mowing, but interpreted to have normal circumstances as composition of grasses differed in W-2 than in adjacent upland hayfield.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☑ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ E6 - Surface Soil Cracks
- ☐ E10 - Drainage Patterns
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☑ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☑ D2 - Geomorphic Position
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)	
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)	**Wetland Hydrology Present?** ☑ Yes ☐ No
Saturation Present?	☑ Yes ☐ No	Depth: 0	(in.)	

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

Remarks: Standing water exists in pockets created by vehicle ruts. FSA slides support interpretation of wetlands in this west lobe of W-2.

SOILS

Map Unit Name: Muskego muck   Series Drainage Class: very poorly

Taxonomy (Subgroup): Limnic Haplosaprists

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Redox Features Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	8	1	10YR 2/1	100	--	--	--	--	silty clay loam
8	14	2	5Y 3/1	95	10YR 4/4	5	C	M	silty clay
14	20	3	5Y 6/1	90	10YR 4/4	10	C	M	clay
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☐ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☐ F3 - Depleted Matrix
- ☑ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ S7 - Dark Surface
- ☐ F12 - Iron-Manganese Masses
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type: N/A	Depth: N/A	**Hydric Soil Present?** ☑ Yes ☐ No

Remarks:

WETLAND DETERMINATION DATA FORM
Midwest Region

Project/Site: Emerald Park Landfill - Western Expansion		**Wetland ID:** W2	**Sample Point** W2-7w	

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--		--	--	--
3.	--		--	--	--
4.	--		--	--	--
5.	--		--	--	--
6.	--		--	--	--
7.	--		--	--	--
8.	--		--	--	--
9.	--		--	--	--
10.	--		--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	PHALARIS ARUNDINACEA	90	Y	FACW
2.	TARAXACUM OFFICINALE	5	N	FACU
3.	TRIFOLIUM PRATENSE	5	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	100		

Woody Vine Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

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: **100.0%** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	90	x 2 =	180
FAC spp.	0	x 3 =	0
FACU spp.	10	x 4 =	40
UPL spp.	0	x 5 =	0
Total	100 (A)		220 (B)

Prevalence Index = B/A = **2.200**

Hydrophytic Vegetation Indicators:

☑ Yes	☐ No	Rapid Test for Hydrophytic Vegetation
☑ Yes	☐ No	Dominance Test is > 50%
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *
☐ Yes	☑ No	Morphological Adaptations (Explain) *
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *

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

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Sample point located in a low quality wet meadow community apparently being used for hay. Vegetation disturbed from recent mowing, however normal circumstances interpreted to be present.

Additional Remarks:

Sample point exhibits wetland characteristics despite recent mowing and disturbance.

Project/Site:	Emerald Park Landfill - Western Expansion		Stantec Project #:	193702557		Date:	10/23/14

Project/Site: Emerald Park Landfill - Western Expansion **Stantec Project #:** 193702557 **Date:** 10/23/14
Applicant: Advanced Disposal Services, INC **County:** Waukesha
Investigator #1: Eric Parker **Investigator #2:** Jaron Tylock **State:** Wisconsin
Soil Unit: Montgomery silty clay loam **NWI/WWI Classification:** N/A **Wetland ID:** Adj to W2A
Landform: Hill Slope **Local Relief:** Convex **Sample Point:** W2-8u
Slope (%): 0-2 **Latitude:** N/A **Longitude:** N/A **Datum:** N/A **Community ID:** Agricultural Field
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) ☑ Yes ☐ No **Section:** 36
Are Vegetation ☑ , Soil ☑, or Hydrology ☐ significantly disturbed? Are normal circumstances present? **Township:** 5 N
Are Vegetation ☐ , Soil ☐, or Hydrology ☐ naturally problematic? ☐ Yes ☑No **Range:** 20 E

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present?	☑ Yes ☐ No	Hydric Soils Present? ☑ Yes ☐ No
Wetland Hydrology Present?	☐ Yes ☑ No	Is This Sampling Point Within A Wetland? ■ Yes ☑ No

Remarks: Antecedent moisture conditions normal based on WETS analysis. Point located in an agricultural field with potential hydrological manipulations. Normal circumstances assumed not present. FSA slides interpreted to support an upland determination at this location and going south.

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present ☐):

Primary:
- ☐ A1 - Surface Water
- ☐ A2 - High Water Table
- ☐ A3 - Saturation
- ☐ B1 - Water Marks
- ☐ B2 - Sediment Deposits
- ☐ B3 - Drift Deposits
- ☐ B4 - Algal Mat or Crust
- ☐ B5 - Iron Deposits
- ☐ B7 - Inundation Visible on Aerial Imagery
- ☐ B8 - Sparsely Vegetated Concave Surface

- ☐ B9 - Water-Stained Leaves
- ☐ B13 - Aquatic Fauna
- ☐ B14 - True Aquatic Plants
- ☐ C1 - Hydrogen Sulfide Odor
- ☐ C3 - Oxidized Rhizospheres on Living Roots
- ☐ C4 - Presence of Reduced Iron
- ☐ C6 - Recent Iron Reduction in Tilled Soils
- ☐ C7 - Thin Muck Surface
- ☐ D9 - Gauge or Well Data
- ☐ Other (Explain in Remarks)

Secondary:
- ☐ E6 - Surface Soil Cracks
- ☐ E10 - Drainage Patterns
- ☐ C2 - Dry-Season Water Table
- ☐ C8 - Crayfish Burrows
- ☐ C9 - Saturation Visible on Aerial Imagery
- ☐ D1 - Stunted or Stressed Plants
- ☐ D2 - Geomorphic Position
- ☑ D5 - FAC-Neutral Test

Field Observations:

Surface Water Present?	☐ Yes ☑ No	Depth:	(in.)	
Water Table Present?	☐ Yes ☑ No	Depth:	(in.)	**Wetland Hydrology Present?** ☐ Yes ☑ No
Saturation Present?	☐ Yes ☑ No	Depth:	(in.)	

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

Remarks: No primary hydrology indicators observed and only one secondary indicator. FSA slides indicated uplands at this location and to the south. Transect of points going NW contrast with this point in that they possess primary hydrology indicators and elevation rises slightly going SE.

SOILS

Map Unit Name: Montgomery silty clay loam **Series Drainage Class:** very poorly
Taxonomy (Subgroup): Vertic Endoaquolls

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix Color (Moist)	%	Redox Features Color (Moist)	%	Type	Location	Texture (e.g. clay, sand, loam)
0	9	1	10YR 3/1	100	--	--	--	--	silty clay loam
9	24	2	10YR 6/1	60	10YR 5/8	40	C	M	clay
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present ☐):
- ☐ A1- Histosol
- ☐ A2 - Histic Epipedon
- ☐ A3 - Black Histic
- ☐ A4 - Hydrogen Sulfide
- ☐ A5 - Stratified Layers
- ☐ A10 - 2 cm Muck
- ☑ A11 - Depleted Below Dark Surface
- ☐ A12 - Thick Dark Surface
- ☐ S1 - Sandy Muck Mineral
- ☐ S3 - 5 cm Mucky Peat or Peat

- ☐ S4 - Sandy Gleyed Matrix
- ☐ S5 - Sandy Redox
- ☐ S6 - Stripped Matrix
- ☐ F1 - Loamy Muck Mineral
- ☐ F2 - Loamy Gleyed Matrix
- ☑ F3 - Depleted Matrix
- ☐ F6 - Redox Dark Surface
- ☐ F7 - Depleted Dark Surface
- ☐ F8 - Redox Depressions

Indicators for Problematic Soils [1]
- ☐ A16 - Coast Prairie Redox
- ☐ S7 - Dark Surface
- ☐ F12 - Iron-Manganese Masses
- ☐ TF12 - Very Shallow Dark Surface
- ☐ Other (Explain in Remarks)

[1] Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A Depth: N/A **Hydric Soil Present?** ☑ Yes ☐ No

Remarks: Continued plowing over decades in combination with soil erosion has likely reduced the thickness of horizon 1 contributing to its existing hydric status.

WETLAND DETERMINATION DATA FORM
Midwest Region

| Project/Site: | Emerald Park Landfill - Western Expansion | Wetland ID: | Adj to W2A | Sample Point | W2-8u |

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)

	Species Name	% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--		--	--	--
3.	--		--	--	--
4.	--		--	--	--
5.	--		--	--	--
6.	--		--	--	--
7.	--		--	--	--
8.	--		--	--	--
9.	--		--	--	--
10.	--		--	--	--
	Total Cover =	0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
	Total Cover =	0		

Herb Stratum (Plot size: 5 ft radius)

		% Cover	Dominant	Ind.Status
1.	ECHINOCHLOA CRUS-GALLI	10	Y	FACW
2.	Agrostis hyemalis	8	Y	FAC
3.	Ambrosia artemisiifolia	2	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
	Total Cover =	20		

Woody Vine Stratum (Plot size: 30 ft radius)

		% Cover	Dominant	Ind.Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
	Total Cover =	0		

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: **100.0%** (A/B)

Prevalence Index Worksheet

Total % Cover of:		Multiply by:	
OBL spp.	0	x 1 =	0
FACW spp.	10	x 2 =	20
FAC spp.	8	x 3 =	24
FACU spp.	2	x 4 =	8
UPL spp.	0	x 5 =	0
Total	20 (A)		52 (B)

Prevalence Index = B/A = **2.600**

Hydrophytic Vegetation Indicators:

☐ Yes	☑ No	Rapid Test for Hydrophytic Vegetation	
☑ Yes	☐ No	Dominance Test is > 50%	
☑ Yes	☐ No	Prevalence Index is ≤ 3.0 *	
☐ Yes	☑ No	Morphological Adaptations (Explain) *	
☐ Yes	☑ No	Problem Hydrophytic Vegetation (Explain) *	

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

Definitions of Vegetation Strata:

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Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. 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: Soybean crop recently harvested and soils plowed; weeds present. Had the soybean crop been present, it could potentially change the dominant species in the herb plot.

Additional Remarks:

Hydrophytic vegetation and hydric soils determined present, although both factors were significantly disturbed. A lack of primary hydrology indicators, contrasting with points to the north, and FSA slide interpretations supported an upland determination.