WETLAND DELINEATION

NORTH SANITARY LANDFILL
DAYTON, MONTGOMERY COUNTY, OHIO

Prepared For:
Valleycrest Landfill Site Group

Prepared by:
Conestoga-Rovers & Associates

651 Colby Drive
Waterloo, Ontario
Canada N2V 1C2

Office: (519) 884-0510
Fax: (519) 884-0525

web: http:\\www.CRAworld.com

JUNE 2001
REF. NO. 16816 (2)

TABLE OF CONTENTS

LIST OF FIGURES
(Following Text)

LIST OF APPENDICES

LIST OF EXHIBITS

PHOTOGRAPHS 1 THROUGH 18

1.0 INTRODUCTION

1.1 GENERAL

This report is a presentation of data on the three diagnostic characteristics of wetlands for the North Sanitary Landfill, also known as the Valleycrest Landfill, in Dayton, Montgomery County, Ohio. The report was prepared by Conestoga-Rovers & Associates (CRA) for the Valleycrest Landfill Site Group (VLSG). The VLSG is conducting a Remedial Investigation/Feasibility Study (RI/FS) under the oversight of the Ohio Environmental Protection Agency. A delineation of potential wetlands on the site is included in the scope of the Addendum to the RI/FS Work Plan.

1.2 PURPOSE AND SCOPE

The purpose of this report is to present field data on the three diagnostic characteristics of wetlands and an opinion on the presence and potential extent of wetlands on the site. This report was prepared in accordance with guidance found in the *Corps of Engineers Wetlands Delineation Manual* (U.S. Army Engineer Waterways Experiment Station 1987) and can be used to assess the acreage of wetlands on the site.

Wetlands are defined by the United States Environmental Protection Agency (USEPA), the U.S. Army Corps of Engineers, and the Ohio EPA as "Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (40 CFR 230.3). The three diagnostic characteristics of wetlands are the soils, the vegetation, and the hydrology. Wetlands must exhibit hydric soils, a prevalence of hydrophytic vegetation, and periodic soil saturation. Each of these characteristics as well as modifications to normal circumstances are described for the site. Data from 18 sample locations are presented on data forms in Appendix A.

2.0 SITE DESCRIPTION

2.1 SITE LOCATION

The site is located northeast of the center of the City of Dayton, Montgomery County, Ohio. The site is in an urban setting surrounded by residential, commercial, and industrial land uses. The Great Miami River is located approximately 3,500 feet northwest of the site and the Mad River is located approximately 4,000 feet south of the site. Figure 1 is a site location map showing the location of the site in Sections 30 and 36 Range 7, Township 2. The site is on the "Dayton North, Ohio" USGS topographic map, the "Dayton North, Ohio" National Wetlands Inventory map (U.S. Department of Interior 1993), and map sheet No. 35 of the *Soil Survey of Montgomery County, Ohio* (USDA Soil Conservation Service 1976).

2.2 SITE DESCRIPTION

The site consists of approximately 100 acres divided by Valleycrest Drive which runs from south to north through the site. Approximately 65 acres are located west of the road and approximately 35 acres are east of the road. The ground surface and topography on the majority of the site have been altered over time due to use of the site for gravel mining and subsequently as a landfill, and by remedial actions at the closed landfill. Approximately 80 percent of the surface soils on the site have been disturbed. Approximately 1/3 of the site is currently under active remediation with excavated pits and mounds of soil and debris located throughout the site.

Natural habitats on the site appear to be of recent origin. Most land surfaces not under active remediation support invading weeds, grasses and shrubs growing on landfill cover. Old-field successional areas are the predominant terrestrial habitats at the site. A few mature shrubs and saplings are scattered around the site, however the only mature trees on the site are located in a valley along the west site boundary. Several water-filled depressions that support hydrophytic vegetation occur on the site. With the exception of amphibian larvae, no fish or other aquatic vertebrates were observed in any of the pools of standing water on the site. None of the areas identified in this report as being potential jurisdictional wetlands are part of any surface tributary system.

2.3 SITE HISTORY

The site is currently owned by the Keystone Gravel Company, Inc. (Keystone) and was operated as a sand and gravel quarry from approximately 1935 until the 1970s. Beginning in approximately 1966, Keystone allowed landfilling to occur through a series of leases granted to various landfill operators for respective parcels within the site. Industrial and municipal wastes were accepted at the site from 1966 until approximately 1989. The USEPA began investigating the site in 1986, and the site was placed on the National Priorities List in 1994. The following year, RI/FS activities commenced under the oversight of the Ohio EPA. The VLSG initiated a removal action in Disposal Area 5 in November 1998. This involved excavation of approximately a 4-acre area within Disposal Area 5. Disturbance of the ground surface resulted from the excavation activity, support area construction, waste stockpiling (approximately 5 acres), on-site road construction, test trenching, landfill gas abatement system construction, and excavation of borrow material (approximately 2 acres). The removal action in Disposal Area 5 is expected to be complete in mid-2001, after which time, removal action will be undertaken in Disposal Area 1.

3.0 FIELD SURVEY

3.1 GENERAL

On April 24, 2001, CRA field personnel inspected the site. Observations were made throughout the site. Eighteen locations were chosen for collecting data in order to characterize broad areas of the site and to identify areas that meet the technical criteria for wetlands. At each sample location, vegetation species were recorded and dominance was estimated, soils were observed to determine if hydric properties exist, and observations were made of hydrologic conditions. Photographs were taken to document site conditions; copies are reproduced herein as Photographs 1-18.

3.2 PRELIMINARY DATA GATHERING

Prior to conducting field work, CRA reviewed available information and characteristics of the site. Information sources included the USGS 7.5-minute topographic map (Figure 1), the soil survey (Exhibit 1), the National Wetlands Inventory (NWI) map (Exhibit 2), a color aerial photograph dated April 26, 2000 (Exhibit 3), and various documents describing site conditions including the "Initial Site Characterization, Phase 1A Ecological Survey, North Sanitary Landfill Site" (KEMRON Environmental Services, September 1996).

The "Phase 1a Ecological Survey" identified 38 palustrine emergent/scrub-shrub wetlands on the site. Together these wetlands covered 3.25 acres. According to the NWI map, the site contained five wetland areas based on April 1988 aerial photography. Four of the wetland areas were classified as "Palustrine Emergent Seasonally Flooded" wetlands and one was classified as "Palustrine Emergent Semipermanently Flooded".

3.3 SAMPLE LOCATIONS

Sample locations were chosen to document conditions in areas that appeared to exhibit wetland characteristics and to represent large areas of nonwetlands typical of conditions on the majority of the site. Data were collected in all areas that appeared to exhibit two of the three diagnostic characteristics of wetlands. Vegetation and hydrologic indicators were relied upon to determine wetland boundaries. All surface soils observed on the site appeared to be landfill cover, which typically consists of unconsolidated materials without natural soil horizons. For this reason, soils were not relied upon for identifying potential wetlands. Rainfall on the day prior to the site inspection caused areas of

standing water to be larger than normal based on the presence of hydrophytic vegetation. Sample Locations 5 and 18 were chosen to represent the well drained majority of the site. Sample Locations 11 and 12 were chosen to characterize a valley which, at an undisturbed site, would have had a natural drain. The remaining sample locations represent areas where standing water and hydrophytic vegetation were observed. Sample Location 14 consists of four small depressions that are homogeneous in species composition and separated by extraction well piping and berms. The sample locations are shown on Figure 2.

3.4 FIELD PERSONNEL

Field data were collected by Mr. David G. Marschall, Mr. Charles E. Jones, Mr. Matthew E. Elkins, and Mr. Jason P. Caudill of CRA. Mr. Marschall is a wetland specialist with 21 years of experience performing determinations and delineations. Mr. Jones is a wildlife biologist with 10 years of experience performing wetland delineations and 14 years experience identifying vegetation. Mr. Elkins is an environmental specialist with experience in bioassessments of Ohio surface waters. Mr. Caudill is a field technician familiar with the Valleycrest site. Messrs. Marschall, Jones, and Elkins have received qualification training for testing under the Corps of Engineers Wetland Delineator Certification Program.

4.0 SITE DATA

4.1 SOILS

The soil survey shows that soils of the site are primarily classified as Gravel Pit soils. Approximately 80 percent of the site is mapped as Gravel Pit, approximately 10 percent of the site is mapped as Made Land, and approximately 10 percent of the site is mapped as Fox-Urban land complex. None of the mapped soils are listed as hydric soils in "Hydric Soils of the United States, NRCS National Hydric Soils List" (USDA Natural Resources Conservation Service 1996) or "Hydric Soils of Ohio" (USDA Natural Resources Conservation Service 1995).

CRA observed that soils at all sample locations are previously disturbed and primarily consist of some form of landfill cover. Soils observed throughout the site consist of a mixture of gravel, sand, silt, and landfill debris without evidence of natural horizons. Soil observed at Sample Location 11 near the western site boundary appeared to most resemble the lower layers of Fox silt loam. Soil that was inundated or saturated on the day of the site inspection was considered to function as a hydric soil if wetland vegetation was also present at that location. Inundated and saturated soils were observed in small depressions throughout the site. Areas with inundated or saturated soil were observed at 14 of 18 sample locations shown on Figure 2.

4.2 VEGETATION

CRA observed facultative-wetland and obligate-wetland plant species in 14 depressions where inundated or saturated soil was observed. The most common species observed in these areas include black willow (*Salix nigra*), cattail (*Typha latifolia*), least spike rush (*Eleocharis acicularis*), and Illinois pondweed (*Potamogeton illinoensis*). The majority of the site is being invaded by upland weeds and grasses such as old field cinquefoil (*Potentilla simplex*), yellow sweetclover (*Melilotus officinalis*), white clover (*Trifolium repens*), perennial rye grass (*Lolium perrene*), and annual blue grass (*Poa annua*). Forested areas are dominated by facultative and facultative-upland species such as eastern cotton-wood (*Populus deltoides*), dogbane (*Apocynum medium*), cup plant (*Silphium perfoliatum*), and Virginia creeper (*Parthenocissus quinquefolia*). The vegetation criterion for wetlands was met at 15 of the 18 sample locations.

4.3 HYDROLOGY

Elevations on the site range from 745 to 770 feet above the National Geodetic Vertical Datum for mean sea level. The site is generally flat except for a valley that passes through the forested area, excavated pits and associated mounds, and the small depressions shown on Figure 2 as potential wetlands.

CRA observed no primary or secondary indicators of wetland hydrology on the majority of the site. In areas of standing water, wetland hydrology was assumed based on the presence of hydrophytic vegetation or the physical characteristics of the depression holding water. Due to recent rainfall, shallow water extended the limits of small pools, and field judgements to account for evaporation were based on emergent plants, drift lines, or other indicators of normal water levels. Wetland hydrology indicators observed in the small depressions on the site include inundation, soil saturation in the upper 12 inches, drift lines, water marks, and water-stained leaves. The criterion for wetland hydrology was met at 14 of 18 sample locations.

5.0 FINDINGS AND CONCLUSIONS

5.1 FINDINGS

Data were gathered and observations were made on the three diagnostic characteristics of wetlands on the approximate 100-acre North Sanitary Landfill or Valleycrest site in Dayton, Montgomery County, Ohio. The findings include:

- National Wetlands Inventory Map: The 1993 map, which is based on 1988 aerial photography, shows five apparently isolated pockets of palustrine emergent wetlands on the site.
- Previous Investigations: Volumes of information, including the RI/FS Work Plan and the Addendum to the RI/FS Work Plan, have been produced as the Keystone sand and gravel operation became the North Sanitary Landfill CERCLA site. The various reports prepared under U.S. and Ohio EPA regulatory guidance document recent changes in the site soils, vegetation, and hydrology. The 1996 "Initial Site Characterization, Phase 1A Ecological Survey" describes 38 emergent wetlands on the site totaling 3.25 acres.
- Soils: Soils on the majority of the site are landfill cover. They are highly disturbed and on many areas of the site have recently been cleared of vegetation. The soils consist of a mixture of gravel, sand, silt, and landfill debris. The upper layers of the soil do not exhibit natural horizons allowing for taxonomic identification. In areas where inundation and soil saturation occur with hydrophytic vegetation, the soil was considered to function as a hydric soil. These areas are limited to the depressions identified as potential wetlands on Figure 2.
- Vegetation: The three principal habitat types on the site are well drained early successional fields, a small area of forest dominated by eastern cotton-woods, and 17 depressions on the site which hold water and contain hydrophytic vegetation. The vegetation species composition in all of the depressions met the vegetation criterion for wetlands. Facultative to facultative-upland species were observed in all other vegetated areas of the site.
- Hydrology: The majority of the site appears to drain well due to topographic relief and porous well drained soil; however, the depressions identified on Figure 2 appear to remain saturated for more than 5 percent of the growing season. Seventeen depressional areas were observed to be holding water.

5.2 JURISDICTIONAL CONSIDERATIONS

The site supports limited areas of what are referred to as "man-induced wetlands." According to the *Corps of Engineers Wetlands Delineation Manual*, the water-filled depressions at the Valleycrest site are wetlands if three conditions are met: the presence of hydrophytic vegetation, the presence of wetland hydrology, and documentation that changes in hydrology occurred so recently that soils could not have developed hydric characteristics. At the Valleycrest site, these wetlands appear to have formed incidentally. In many such wetlands, as is the case at the Valleycrest site, hydric soils are usually absent. According to the National Technical Committee for Hydric Soils, hydric soils require hundreds of years for development of wetness characteristics, and most man-induced wetlands have not been in existence for a sufficient period for soils to become hydric.

Man-induced wetlands can be regulated if the activity that resulted in wetlands is exempt from regulation. The shallow depressions that support hydrophytes are the result of remedial actions within the past 5 years at the Valleycrest Site. Actions at CERCLA sites are exempt from permitting requirements of Section 404 of the Clean Water Act.

All wetlands observed at the Valleycrest site are isolated from the surface tributary system of the Mad River and the Great Miami River. The site likely was once connected to other waters of the United States, but the long history of modifications – including gravel mining, surrounding urbanization, landfilling, and remedial actions – has resulted in a "new" land surface with 1.41 acres of isolated pools that are not adjacent to other waters. The Corps of Engineers could consider these pools outside its jurisdiction based on the January 9, 2001, U.S. Supreme Court ruling in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*. In response to the U.S. Supreme Court ruling, on April 17, 2001, the governor of the State of Ohio issued an executive order requiring a state permit for any isolated wetlands subject to national permits prior to January 9, 2001. The Valleycrest site was not subject to national permitting due to its status as a CERCLA site.

5.3 CONCLUSIONS

Positive evidence of at least two diagnostic characteristics for jurisdictional wetlands was found at 14 of 18 sample locations. Approximately 1.41 acres of the site appear to meet the technical criteria for man-induced wetlands based on guidance in the *Corps of*

Engineers Wetlands Delineation Manual. Figure 2 shows the areas on the North Sanitary Landfill site identified as potential jurisdictional wetlands.

6.0 REFERENCES

Code of Federal Regulations, 40 CFR Part 230, Environmental Protection Agency "Guidelines for Specification of Disposal Sites for Dredged or Fill Material", Vol. 45, No. 249, December 24, 1980.

Cowardin, L.M., Carter, V., Golet, F.C., LaRoe, E.T., *Classification of Wetlands and Deepwater Habitats of the United States*, U.S. Department of Interior, Fish & Wildlife Service, 1979.

Environmental Laboratory, *Corps of Engineers Wetlands Delineation Manual*, U.S. Army Engineer Waterways Experiment Station, 1987.

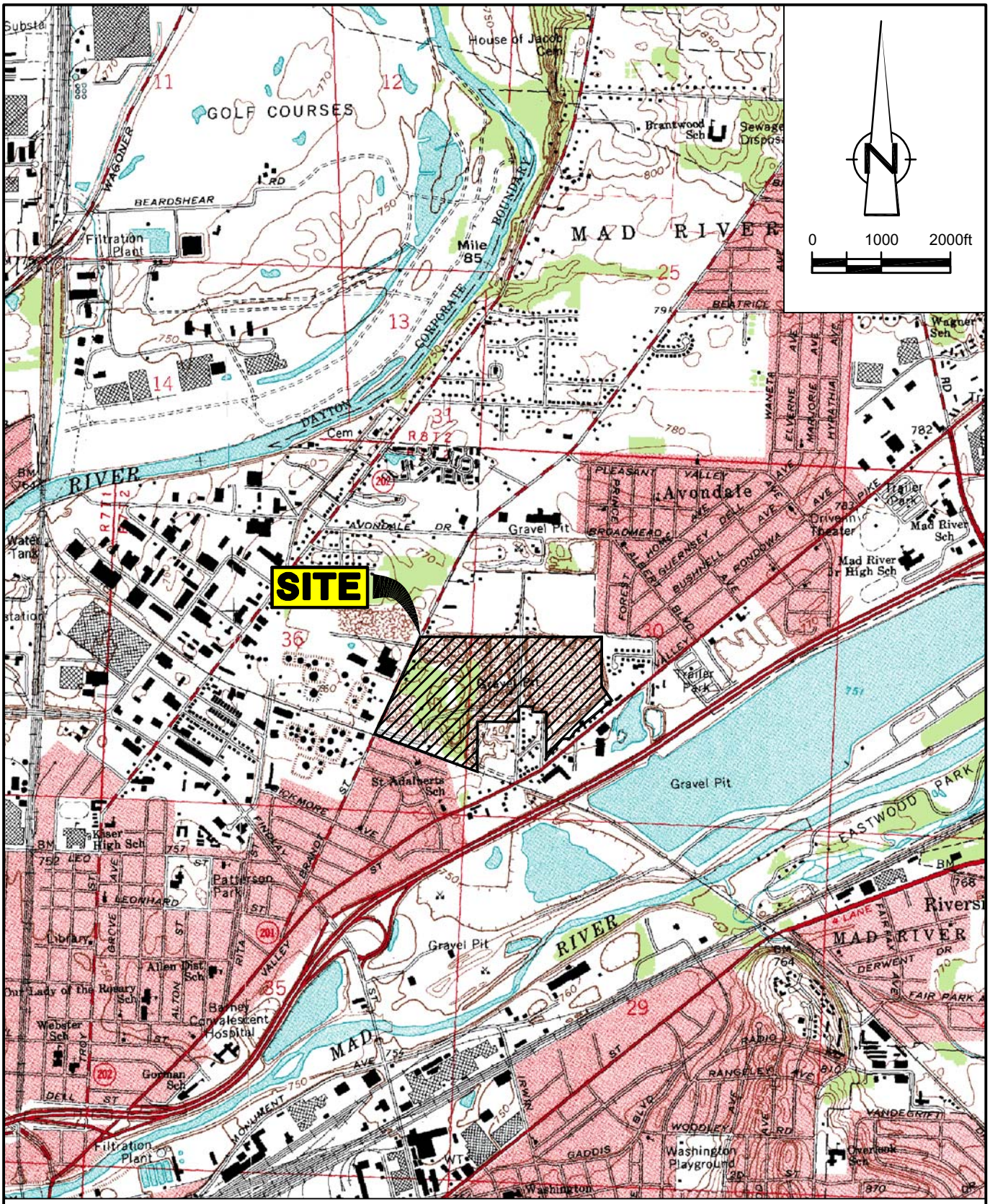
Fish & Wildlife Service, National Wetlands Inventory map "Dayton North, Ohio", U.S. Department of Interior, 1993.

KEMRON Environmental Services, "Initial Site Characterization, Phase 1A Ecological Survey, North Sanitary Landfill Site", September, 1996.

Soil Conservation Service (Natural Resources Conservation Service), *Soil Survey of Montgomery County, Ohio*, U.S. Department of Agriculture, 1976.

Soil Conservation Service (Natural Resources Conservation Service), *Hydric Soils of the United States*, U.S. Department of Agriculture, 1996.

Soil Conservation Service (Natural Resources Conservation Service), *Hydric Soils of Ohio*, U.S. Department of Agriculture, 1995.

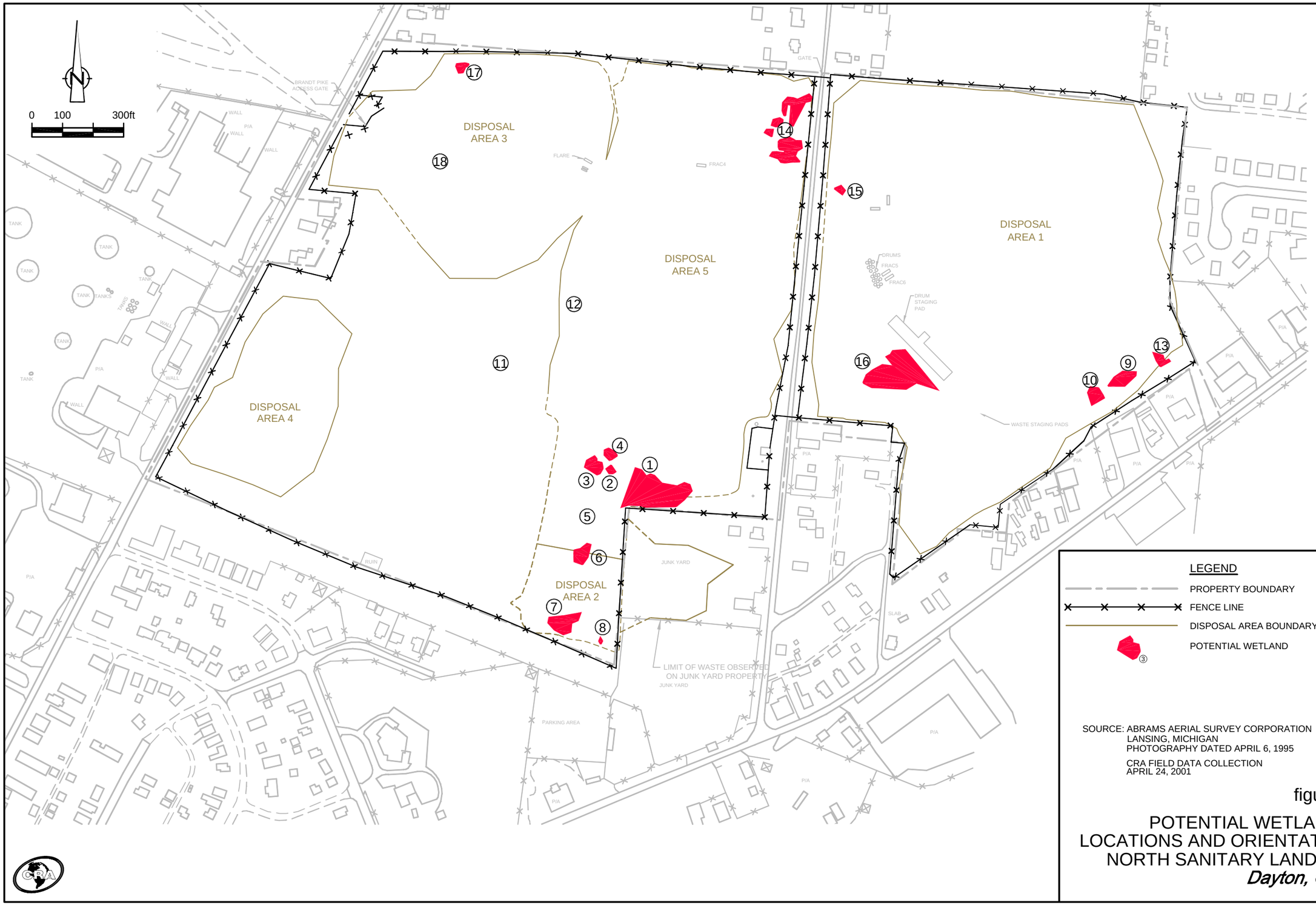


RE: U.S.G.S. 7.5-MINUTE SERIES TOPOGRAPHIC MAP, "DAYTON, OHIO," 1965, REVISED 1992.

figure 1

SITE LOCATION
NORTH SANITARY LANDFILL
Dayton, Ohio

16816-10(002)GN-BR001 JUN 08/2001



LEGEND

- PROPERTY BOUNDARY
- FENCE LINE
- DISPOSAL AREA BOUNDARY
- POTENTIAL WETLAND ③

SOURCE: ABRAMS AERIAL SURVEY CORPORATION
LANSING, MICHIGAN
PHOTOGRAPHY DATED APRIL 6, 1995

CRA FIELD DATA COLLECTION
APRIL 24, 2001

figure 2

POTENTIAL WETLANDS LOCATIONS AND ORIENTATION NORTH SANITARY LANDFILL

Dayton, Ohio

16816-10(002)GN-BR002 MAY 29/2001

APPENDIX A

ROUTINE WETLAND DETERMINATION DATA FORMS

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 1

Project/Site:	North Sanitary Landfill Site	Date:	4/24/01
Applicant/Owner:	VLSG	County:	Montgomery
Investigator:	Charles E. Jones	State:	Ohio

Do Normal Circumstances exist on the site?	Yes	(No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes)	No	Transect ID:	N/A
Is the area a potential Problem Area?	Yes	(No)	Sample Location:	1
(If needed, explain on reverse.)				

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	S	FACW+	9.		
2. *Typha latifolia*	H	OBL	10.		
3. *Eleocharis acicularis*	H	OBL	11.		
4. *Potamogeton illinoensis*	H	OBL	12.		
5. *Paspalum floridanum*	H	FACW	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

____ Stream, Lake, or Tide Gauge
X Aerial Photographs
X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 - 6 (in.)
Depth of Free Water in Pit: -- (in.)
Depth to Saturated Soil: -- (in.)

Wetland Hydrology Indicators:

Primary Indicators:
Y Inundated
Y Saturated in Upper 12 inches
Y Water Marks
Y Drift Lines
N Sediment Deposits
N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
N Oxidized Root Channels in Upper 12 inches
Y Water-Stained Leaves
N Local Soil Survey Data
Y FAC-Neutral Test
N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 1**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

- N Histosol
- N Histic Epipedon
- N Sulfidic
- Y Aquic Moisture Regime
- Y Reducing Conditions
- N Gleyed or Low-Chroma Colors
- N Concretions
- N High Organic Content in Surface Layer in Sandy Soils
- N Organic Streaking in Sandy Soils
- N Listed on Local Hydric Soils List
- N Listed on National Hydric Soils List
- Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)	
Hydrophytic Vegetation Present	(Yes)	No			
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	(Yes)	No

Remarks: Soil observed is inundated and saturated, and appears to remain so for a significant portion of the growing season.

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 2

Project/Site:	North Sanitary Landfill Site			Date:	4/24/01
Applicant/Owner:	VLSG			County:	Montgomery
Investigator:	Charles E. Jones			State:	Ohio
Do Normal Circumstances exist on the site?		Yes	(No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?		(Yes)	No	Transect ID:	N/A
Is the area a potential Problem Area?		Yes	(No)	Sample Location:	2
(If needed, explain on reverse.)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	S	FACW+	9.		
2. *Eleocharis acicularis*	H	OBL	10.		
3. *Paspalum floridanum*	H	OBL	11.		
4. *Potamogeton illinoensis*	H	OBL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

____ Stream, Lake, or Tide Gauge
X Aerial Photographs
X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 - 3 (in.)
Depth of Free Water in Pit: -- (in.)
Depth to Saturated Soil: -- (in.)

Wetland Hydrology Indicators:

Primary Indicators:
Y Inundated
Y Saturated in Upper 12 Inches
Y Water Marks
Y Drift Lines
N Sediment Deposits
N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
N Oxidized Root Channels in Upper 12 inches
Y Water-Stained Leaves
N Local Soil Survey Data
Y FAC-Neutral Test
N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 2**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations
Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

- N Histosol
- N Histic Epipedon
- N Sulfidic
- Y Aquic Moisture Regime
- Y Reducing Conditions
- N Gleyed or Low-Chroma Colors
- N Concretions
- N High Organic Content in Surface Layer in Sandy Soils
- N Organic Streaking in Sandy Soils
- N Listed on Local Hydric Soils List
- N Listed on National Hydric Soils List
- Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)	
Hydrophytic Vegetation Present	(Yes)	No
Wetland Hydrology Present?	(Yes)	No
Hydric Soils Present?	Yes	(No)

(Circle)

Is this Sampling Point Within a Wetland? (Yes) No

Remarks: Soil observed is inundated and saturated, and appears to remain so for a significant portion of the growing season.

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 3

Project/Site:	North Sanitary Landfill Site	Date:	4/24/01
Applicant/Owner:	VLSG	County:	Montgomery
Investigator:	Charles E. Jones	State:	Ohio
Do Normal Circumstances exist on the site?	Yes (No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes) No	Transect ID:	N/A
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes (No)	Sample Location:	3

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	S	FACW	9.		
2. *Eleocharis acicularis*	H	OBL	10.		
3. *Bacopa caroliniana*	H	OBL	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

____ Stream, Lake, or Tide Gauge
X Aerial Photographs
X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 - 4 (in.)
Depth of Free Water in Pit: -- (in.)
Depth to Saturated Soil: -- (in.)

Wetland Hydrology Indicators:

Primary Indicators:
Y Inundated
Y Saturated in Upper 12 inches
Y Water Marks
Y Drift Lines
N Sediment Deposits
N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
N Oxidized Root Channels in Upper 12 inches
Y Water-Stained Leaves
N Local Soil Survey Data
Y FAC-Neutral Test
N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 3**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

- N Histosol
- N Histic Epipedon
- N Sulfidic
- Y Aquic Moisture Regime
- Y Reducing Conditions
- N Gleyed or Low-Chroma Colors
- N Concretions
- N High Organic Content in Surface Layer in Sandy Soils
- N Organic Streaking in Sandy Soils
- N Listed on Local Hydric Soils List
- N Listed on National Hydric Soils List
- Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)	
Hydrophytic Vegetation Present	(Yes)	No			
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	(Yes)	No

Remarks: Soil observed is inundated and saturated, and appears to remain so for a significant portion of the growing season.

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 4

Project/Site:	North Sanitary Landfill Site	Date:	4/24/01
Applicant/Owner:	VLSG	County:	Montgomery
Investigator:	Charles E. Jones	State:	Ohio
Do Normal Circumstances exist on the site?	Yes (No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes) No	Transect ID:	N/A
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes (No)	Sample Location:	4

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Typha latifolia*	H	OBL	9.		
2. *Salix nigra*	S	FACW	10.		
3. *Eleocharis acicularis*	S	OBL	11.		
4. *Potamogeton illinoensis*	H	OBL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

____ Stream, Lake, or Tide Gauge
X Aerial Photographs
X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 - 6 (in.)
Depth of Free Water in Pit: -- (in.)
Depth to Saturated Soil: -- (in.)

Wetland Hydrology Indicators:

Primary Indicators:
Y Inundated
Y Saturated in Upper 12 inches
Y Water Marks
Y Drift Lines
Y Sediment Deposits
N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
N Oxidized Root Channels in Upper 12 inches
Y Water-Stained Leaves
N Local Soil Survey Data
Y FAC-Neutral Test
N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 4**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations
Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

- N Histosol
- N Histic Epipedon
- N Sulfidic
- Y Aquic Moisture Regime
- Y Reducing Conditions
- N Gleyed or Low-Chroma Colors
- N Concretions
- N High Organic Content in Surface Layer in Sandy Soils
- N Organic Streaking in Sandy Soils
- N Listed on Local Hydric Soils List
- N Listed on National Hydric Soils List
- Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)
Hydrophytic Vegetation Present	(Yes)	No		
Wetland Hydrology Present?	(Yes)	No		
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	(Yes) No

Remarks: Soil observed is inundated and saturated, and appears to remain so for a significant portion of the growing season.

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 5

Project/Site:	North Sanitary Landfill Site			Date:	4/24/01
Applicant/Owner:	VLSG			County:	Montgomery
Investigator:	Charles E. Jones			State:	Ohio
Do Normal Circumstances exist on the site?		Yes	(No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?		(Yes)	No	Transect ID:	N/A
Is the area a potential Problem Area?		Yes	(No)	Sample Location:	5
(If needed, explain on reverse.)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Melilotus officinalis*	H	FACU-	9.		
2. *Lolium perenne*	H	FACU-	10.		
3. *Potentilla simplex*	H	FACU-	11.		
4. *Plantago lanceolata*	H	UPL	12.		
5. *Stellaria media*	H	UPL	13.		
6. *Setaria italica*	H	FACU	14.		
7. *Cirsium vulgare*	H	FACU-	15.		
8. *Trifolium repens*	H	FACU-	16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks: Typical nonhydrophytic species composition observed over most of the vegetated nonwetland areas of the site.

HYDROLOGY

X Recorded Data (Describe in Remarks):

____ Stream, Lake, or Tide Gauge
X Aerial Photographs
X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (in.)
Depth of Free Water in Pit: 0 (in.)
Depth to Saturated Soil: >12 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
N Inundated
N Saturated in Upper 12 inches
N Water Marks
N Drift Lines
N Sediment Deposits
N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
N Oxidized Root Channels in Upper 12 inches
N Water-Stained Leaves
N Local Soil Survey Data
N FAC-Neutral Test
N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 5**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations
Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

N Histosol	N Concretions
N Histic Epipedon	N High Organic Content in Surface Layer in Sandy Soils
N Sulfidic	N Organic Streaking in Sandy Soils
N Aquic Moisture Regime	N Listed on Local Hydric Soils List
N Reducing Conditions	N Listed on National Hydric Soils List
N Gleyed or Low-Chroma Colors	Y Other (Explain in Remarks)

Remarks: The subsurface in the area consists of unconsolidated gravel, sand, and silt, with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)
Hydrophytic Vegetation Present	Yes	(No)		
Wetland Hydrology Present?	Yes	(No)		
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes (No)

Remarks:

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 6

Project/Site:	North Sanitary Landfill Site			Date:	4/24/01
Applicant/Owner:	VLSG			County:	Montgomery
Investigator:	Charles E. Jones			State:	Ohio
Do Normal Circumstances exist on the site?		Yes	(No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?		(Yes)	No	Transect ID:	N/A
Is the area a potential Problem Area?		Yes	(No)	Sample Location:	6
(If needed, explain on reverse.)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Typha latifolia*	H	OBL	9.		
2. *Eleocharis acicularis*	H	OBL	10.		
3. *Acer rubrum*	S	FAC	11.		
4. *Potamogeton illinoensis*	H	OBL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

____ Stream, Lake, or Tide Gauge
X Aerial Photographs
X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 - 10 (in.)
Depth of Free Water in Pit: -- (in.)
Depth to Saturated Soil: -- (in.)

Wetland Hydrology Indicators:

Primary Indicators:
Y Inundated
Y Saturated in Upper 12 inches
Y Water Marks
Y Drift Lines
N Sediment Deposits
N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
N Oxidized Root Channels in Upper 12 inches
Y Water-Stained Leaves
N Local Soil Survey Data
Y FAC-Neutral Test
N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 6**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

- N Histosol
- N Histic Epipedon
- N Sulfidic
- Y Aquic Moisture Regime
- Y Reducing Conditions
- N Gleyed or Low-Chroma Colors
- N Concretions
- N High Organic Content in Surface Layer in Sandy Soils
- N Organic Streaking in Sandy Soils
- N Listed on Local Hydric Soils List
- N Listed on National Hydric Soils List
- Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)	
Hydrophytic Vegetation Present	(Yes)	No			
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	(Yes)	No

Remarks: Soil observed is inundated and saturated, and appears to remain so for a significant portion of the growing season.

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 7

Project/Site:	North Sanitary Landfill Site	Date:	4/24/01
Applicant/Owner:	VLSG	County:	Montgomery
Investigator:	Charles E. Jones	State:	Ohio
Do Normal Circumstances exist on the site?	Yes (No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes) No	Transect ID:	N/A
Is the area a potential Problem Area?	Yes (No)	Sample Location:	7
(If needed, explain on reverse.)			

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	S	FACW+	9.		
2. *Eleocharis acicularis*	H	OBL	10.		
3. *Potamogeton illioensis*	H	OBL	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

____ Stream, Lake, or Tide Gauge
X Aerial Photographs
X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 - 12 (in.)
Depth of Free Water in Pit: -- (in.)
Depth to Saturated Soil: -- (in.)

Wetland Hydrology Indicators:

Primary Indicators:
Y Inundated
Y Saturated in Upper 12 inches
Y Water Marks
Y Drift Lines
N Sediment Deposits
N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
N Oxidized Root Channels in Upper 12 inches
Y Water-Stained Leaves
N Local Soil Survey Data
Y FAC-Neutral Test
N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 7**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

- N Histosol
- N Histic Epipedon
- N Sulfidic
- Y Aquic Moisture Regime
- Y Reducing Conditions
- N Gleyed or Low-Chroma Colors
- N Concretions
- N High Organic Content in Surface Layer in Sandy Soils
- N Organic Streaking in Sandy Soils
- N Listed on Local Hydric Soils List
- N Listed on National Hydric Soils List
- Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident

WETLAND DETERMINATION

	(Circle)			(Circle)	
Hydrophytic Vegetation Present	(Yes)	No			
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	(Yes)	No

Remarks: Soil observed is inundated and saturated, and appears to remain so for a significant portion of the growing season.

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 8

Project/Site:	North Sanitary Landfill Site	Date:	4/24/01
Applicant/Owner:	VLSG	County:	Montgomery
Investigator:	Charles E. Jones	State:	Ohio
Do Normal Circumstances exist on the site?	Yes (No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes) No	Transect ID:	N/A
Is the area a potential Problem Area?	Yes (No)	Sample Location:	8
(If needed, explain on reverse.)			

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Eleocharis acicularis*	H	OBL	9.		
2. *Bacopa caroliniana*	H	OBL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

____ Stream, Lake, or Tide Gauge
X Aerial Photographs
X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 - 4 (in.)
Depth of Free Water in Pit: -- (in.)
Depth to Saturated Soil: -- (in.)

Wetland Hydrology Indicators:

Primary Indicators:
Y Inundated
Y Saturated in Upper 12 inches
Y Water Marks
Y Drift Lines
N Sediment Deposits
N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
N Oxidized Root Channels in Upper 12 inches
Y Water-Stained Leaves
N Local Soil Survey Data
Y FAC-Neutral Test
N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 8**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

- N Histosol
- N Histic Epipedon
- N Sulfidic
- Y Aquic Moisture Regime
- Y Reducing Conditions
- N Gleyed or Low-Chroma Colors
- N Concretions
- N High Organic Content in Surface Layer in Sandy Soils
- N Organic Streaking in Sandy Soils
- N Listed on Local Hydric Soils List
- N Listed on National Hydric Soils List
- Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)
Hydrophytic Vegetation Present	(Yes)	No		
Wetland Hydrology Present?	(Yes)	No		
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	(Yes) No

Remarks: Soil observed is inundated and saturated, and appears to remain so for a significant portion of the growing season.

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 9

Project/Site:	North Sanitary Landfill Site	Date:	4/24/01
Applicant/Owner:	VLSG	County:	Montgomery
Investigator:	Charles E. Jones	State:	Ohio
Do Normal Circumstances exist on the site?	Yes (No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes) No	Transect ID:	N/A
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes (No)	Sample Location:	9

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Potamogeton illioensis*	H	OBL	9.		
2. *Eleocharis acicularis*	H	OBL	10.		
3. *Salix nigra*	S	FACW+	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other

___ No Recorded Data Available

Field Observations:

- Depth of Surface Water: 0 - 24 (in.)
- Depth of Free Water in Pit: -- (in.)
- Depth to Saturated Soil: -- (in.)

Wetland Hydrology Indicators:

Primary Indicators:

- Y Inundated
- Y Saturated in Upper 12 inches
- Y Water Marks
- Y Drift Lines
- N Sediment Deposits
- N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

- N Oxidized Root Channels in Upper 12 inches
- Y Water-Stained Leaves
- N Local Soil Survey Data
- Y FAC-Neutral Test
- N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 9**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations
Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

- N Histosol
- N Histic Epipedon
- N Sulfidic
- Y Aquic Moisture Regime
- Y Reducing Conditions
- N Gleyed or Low-Chroma Colors
- N Concretions
- N High Organic Content in Surface Layer in Sandy Soils
- N Organic Streaking in Sandy Soils
- N Listed on Local Hydric Soils List
- N Listed on National Hydric Soils List
- Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)	
Hydrophytic Vegetation Present	(Yes)	No			
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	(Yes)	No

Remarks: Soil observed is inundated and saturated, and appears to remain so for a significant portion of the growing season.

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 10

Project/Site:	North Sanitary Landfill Site	Date:	4/24/01
Applicant/Owner:	VLSG	County:	Montgomery
Investigator:	Charles E. Jones	State:	Ohio
Do Normal Circumstances exist on the site?	Yes (No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes) No	Transect ID:	N/A
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes (No)	Sample Location:	10

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Typha latifolia*	H	OBL	9.		
2. *Potamogeton illioensis*	H	OBL	10.		
3. *Eleocharis acicularis*	H	OBL	11.		
4. *Salix nigra*	S	FACW+	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other

___ No Recorded Data Available

Field Observations:

- Depth of Surface Water: 0 - 10 (in.)
- Depth of Free Water in Pit: -- (in.)
- Depth to Saturated Soil: -- (in.)

Wetland Hydrology Indicators:

Primary Indicators:

- Y Inundated
- Y Saturated in Upper 12 inches
- Y Water Marks
- Y Drift Lines
- N Sediment Deposits
- N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

- N Oxidized Root Channels in Upper 12 inches
- Y Water-Stained Leaves
- N Local Soil Survey Data
- Y FAC-Neutral Test
- N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 10**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations
Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

N Histosol	N Concretions
N Histic Epipedon	N High Organic Content in Surface Layer in Sandy Soils
N Sulfidic	N Organic Streaking in Sandy Soils
Y Aquic Moisture Regime	N Listed on Local Hydric Soils List
Y Reducing Conditions	N Listed on National Hydric Soils List
N Gleyed or Low-Chroma Colors	Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)
Hydrophytic Vegetation Present	(Yes)	No		
Wetland Hydrology Present?	(Yes)	No		
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	(Yes) No

Remarks: Soil observed is inundated and saturated, and appears to remain so for a significant portion of the growing season.

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 11

Project/Site:	North Sanitary Landfill Site	Date:	4/24/01
Applicant/Owner:	VLSG	County:	Montgomery
Investigator:	Charles E. Jones	State:	Ohio
Do Normal Circumstances exist on the site?	Yes (No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes) No	Transect ID:	N/A
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes (No)	Sample Location:	11

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Populus deltoides*	T	FAC	9.		
2. *Equisetum hyemale*	H	FACW	10.		
3. *Vernonia noveboracensis*	H	FACW+	11.		
4. *Galium aparine*	H	FACU	12.		
5. *Ambrosia artemisiifolia*	H	FACU	13.		
6. *Salix nigra*	S	FACW+	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 67

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

____ Stream, Lake, or Tide Gauge
X Aerial Photographs
X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (in.)
Depth of Free Water in Pit: 0 (in.)
Depth to Saturated Soil: >12 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
N Inundated
N Saturated in Upper 12 inches
N Water Marks
N Drift Lines
N Sediment Deposits
N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
N Oxidized Root Channels in Upper 12 inches
N Water-Stained Leaves
N Local Soil Survey Data
Y FAC-Neutral Test
N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 11**

Map Unit Name (Series and Phase): Fox silt loam

Drainage Class: Well drained

Field Observations
Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): Typic Hapludalfs

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0 - 2	Ap	10 YR 4/3			
2 - 16	B	10 YR 6/4	10 YR 5/4	Common	

Hydric Soil Indicators:

- N Histosol
- N Histic Epipedon
- N Sulfidic
- N Aquic Moisture Regime
- N Reducing Conditions
- N Gleyed or Low-Chroma Colors
- Y Concretions
- N High Organic Content in Surface Layer in Sandy Soils
- N Organic Streaking in Sandy Soils
- N Listed on Local Hydric Soils List
- N Listed on National Hydric Soils List
- N Other (Explain in Remarks)

Remarks:

WETLAND DETERMINATION

	(Circle)			(Circle)	
Hydrophytic Vegetation Present	(Yes)	No			
Wetland Hydrology Present?	Yes	(No)			
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes	(No)

Remarks:

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 12

Project/Site:	North Sanitary Landfill Site			Date:	4/24/01
Applicant/Owner:	VLSG			County:	Montgomery
Investigator:	Charles E. Jones			State:	Ohio
Do Normal Circumstances exist on the site?	Yes	(No)		Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes)	No		Transect ID:	N/A
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)		Sample Location:	12

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Populus deltoides*	T	FAC	9.		
2. *Apocynum medium*	S	NL	10.		
3. *Parthenocissus quinquefolia*	WV	FACU	11.		
4. *Silphium perfoliatum*	H	FACU	12.		
5. *Arctium lappa*	H	NL	13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 25

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water:	0	(in.)
Depth of Free Water in Pit:	0	(in.)
Depth to Saturated Soil:	>12	(in.)

Wetland Hydrology Indicators:

Primary Indicators:

- N Inundated
- N Saturated in Upper 12 inches
- N Water Marks
- Y Drift Lines
- N Sediment Deposits
- N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

- N Oxidized Root Channels in Upper 12 inches
- N Water-Stained Leaves
- N Local Soil Survey Data
- N FAC-Neutral Test
- N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 12**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations
Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

N Histosol	Y Concretions
N Histic Epipedon	Y High Organic Content in Surface Layer in Sandy Soils
N Sulfidic	N Organic Streaking in Sandy Soils
N Aquic Moisture Regime	N Listed on Local Hydric Soils List
N Reducing Conditions	N Listed on National Hydric Soils List
N Gleyed or Low-Chroma Colors	Y Other (Explain in Remarks)

Remarks: The soil appeared to be a mixture of runoff sedimentation from a fire that occurred on the site. The soil is well drained.

WETLAND DETERMINATION

	(Circle)			(Circle)	
Hydrophytic Vegetation Present	Yes	(No)			
Wetland Hydrology Present?	Yes	(No)			
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes	(No)

Remarks:

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 13

Project/Site:	North Sanitary Landfill Site	Date:	4/24/01
Applicant/Owner:	VLSG	County:	Montgomery
Investigator:	Charles E. Jones	State:	Ohio

Do Normal Circumstances exist on the site?	Yes	(No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes)	No	Transect ID:	N/A
Is the area a potential Problem Area?	Yes	(No)	Sample Location:	13
(If needed, explain on reverse.)				

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	S	FACW+	9.		
2. *Paspalum floridanum*	H	FACW	10.		
3. *Typha latifolia*	H	OBL	11.		
4. *Vernonia noveboracensis*	H	FACW+	12.		
5. *Potamogenton illinoensis*	H	OBL	13.		
6. *Eleocharis acicularis*	H	OBL	14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other

___ No Recorded Data Available

Field Observations:

- Depth of Surface Water: 0 - 10 (in.)
- Depth of Free Water in Pit: -- (in.)
- Depth to Saturated Soil: -- (in.)

Wetland Hydrology Indicators:

Primary Indicators:

- Y Inundated
- Y Saturated in Upper 12 inches
- Y Water Marks
- Y Drift Lines
- N Sediment Deposits
- N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

- N Oxidized Root Channels in Upper 12 inches
- Y Water-Stained Leaves
- N Local Soil Survey Data
- Y FAC-Neutral Test
- N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 13**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations
Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

- N Histosol
- N Histic Epipedon
- N Sulfidic
- Y Aquic Moisture Regime
- Y Reducing Conditions
- N Gleyed or Low-Chroma Colors
- Y Concretions
- Y High Organic Content in Surface Layer in Sandy Soils
- N Organic Streaking in Sandy Soils
- N Listed on Local Hydric Soils List
- N Listed on National Hydric Soils List
- Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)	
Hydrophytic Vegetation Present	Yes	(No)			
Wetland Hydrology Present?	Yes	(No)			
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes	(No)

Remarks: Soil observed is inundated and saturated, and appears to remain so for a significant portion of the growing season.

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 14

Project/Site:	North Sanitary Landfill Site	Date:	4/24/01
Applicant/Owner:	VLSG	County:	Montgomery
Investigator:	Charles E. Jones	State:	Ohio

Do Normal Circumstances exist on the site?	Yes	(No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes)	No	Transect ID:	N/A
Is the area a potential Problem Area?	Yes	(No)	Sample Location:	14
(If needed, explain on reverse.)				

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Typha latifolia*	H	OBL	9.		
2. *Eleocharis acicularis*	H	OBL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water:	0 - 6	(in.)
Depth of Free Water in Pit:	--	(in.)
Depth to Saturated Soil:	--	(in.)

Wetland Hydrology Indicators:

Primary Indicators:

- Y Inundated
- Y Saturated in Upper 12 inches
- N Water Marks
- N Drift Lines
- N Sediment Deposits
- N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

- N Oxidized Root Channels in Upper 12 inches
- Y Water-Stained Leaves
- N Local Soil Survey Data
- Y FAC-Neutral Test
- N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 14**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

- N Histosol
- N Histic Epipedon
- N Sulfidic
- Y Aquic Moisture Regime
- Y Reducing Conditions
- N Gleyed or Low-Chroma Colors
- Y Concretions
- Y High Organic Content in Surface Layer in Sandy Soils
- N Organic Streaking in Sandy Soils
- N Listed on Local Hydric Soils List
- N Listed on National Hydric Soils List
- Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)	
Hydrophytic Vegetation Present?	(Yes)	No			
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	(Yes)	No

Remarks:

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 15

Project/Site:	North Sanitary Landfill Site	Date:	4/24/01
Applicant/Owner:	VLSG	County:	Montgomery
Investigator:	Charles E. Jones	State:	Ohio
Do Normal Circumstances exist on the site?	Yes (No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes) No	Transect ID:	N/A
Is the area a potential Problem Area?	Yes (No)	Sample Location:	15
(If needed, explain on reverse.)			

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	S	FACW+	9.		
2. *Eleocharis acicularis*	H	OBL	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other

___ No Recorded Data Available

Field Observations:

- Depth of Surface Water: 0 - 3 (in.)
- Depth of Free Water in Pit: -- (in.)
- Depth to Saturated Soil: -- (in.)

Wetland Hydrology Indicators:

Primary Indicators:

- Y Inundated
- Y Saturated in Upper 12 inches
- N Water Marks
- Y Drift Lines
- N Sediment Deposits
- N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

- N Oxidized Root Channels in Upper 12 inches
- N Water-Stained Leaves
- N Local Soil Survey Data
- Y FAC-Neutral Test
- N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 15**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations
Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

- N Histosol
- N Histic Epipedon
- N Sulfidic
- Y Aquic Moisture Regime
- Y Reducing Conditions
- N Gleyed or Low-Chroma Colors
- Y Concretions
- Y High Organic Content in Surface Layer in Sandy Soils
- N Organic Streaking in Sandy Soils
- N Listed on Local Hydric Soils List
- N Listed on National Hydric Soils List
- Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)	
Hydrophytic Vegetation Present	(Yes)	No			
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	(Yes)	No

Remarks:

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 16

Project/Site:	North Sanitary Landfill Site	Date:	4/24/01
Applicant/Owner:	VLSG	County:	Montgomery
Investigator:	Charles E. Jones	State:	Ohio

Do Normal Circumstances exist on the site?	Yes	(No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?	(Yes)	No	Transect ID:	N/A
Is the area a potential Problem Area? (If needed, explain on reverse.)	Yes	(No)	Sample Location:	16

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Salix nigra*	S	FACW+	9.		
2. *Typha latifolia*	H	OBL	10.		
3. *Eleocharis acicularis*	H	OBL	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

____ Stream, Lake, or Tide Gauge
X Aerial Photographs
X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 - 3 (in.)
Depth of Free Water in Pit: -- (in.)
Depth to Saturated Soil: -- (in.)

Wetland Hydrology Indicators:

Primary Indicators:
Y Inundated
Y Saturated in Upper 12 inches
N Water Marks
N Drift Lines
N Sediment Deposits
N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
N Oxidized Root Channels in Upper 12 inches
N Water-Stained Leaves
N Local Soil Survey Data
Y FAC-Neutral Test
N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 16**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations
Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

N Histosol	Y Concretions
N Histic Epipedon	Y High Organic Content in Surface Layer in Sandy Soils
N Sulfidic	N Organic Streaking in Sandy Soils
Y Aquic Moisture Regime	N Listed on Local Hydric Soils List
Y Reducing Conditions	N Listed on National Hydric Soils List
N Gleyed or Low-Chroma Colors	Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)	
Hydrophytic Vegetation Present	(Yes)	No			
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	(Yes)	No

Remarks:

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 17

Project/Site:	North Sanitary Landfill Site			Date:	4/24/01
Applicant/Owner:	VLSG			County:	Montgomery
Investigator:	Charles E. Jones			State:	Ohio
Do Normal Circumstances exist on the site?		Yes	(No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?		(Yes)	No	Transect ID:	N/A
Is the area a potential Problem Area?		Yes	(No)	Sample Location:	17
(If needed, explain on reverse.)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Populus deltoides*	T	FAC	9.		
2. *Eleocharis acicularis*	H	OBL	10.		
3. *Potamogenton illinoensis*	H	OBL	11.		
4. *Carex sp.*	H		12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 100

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks):

- ___ Stream, Lake, or Tide Gauge
- X Aerial Photographs
- X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water:	0 - 8	(in.)
Depth of Free Water in Pit:	--	(in.)
Depth to Saturated Soil:	--	(in.)

Wetland Hydrology Indicators:

Primary Indicators:

- Y Inundated
- Y Saturated in Upper 12 inches
- Y Water Marks
- Y Drift Lines
- N Sediment Deposits
- N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

- N Oxidized Root Channels in Upper 12 inches
- N Water-Stained Leaves
- N Local Soil Survey Data
- Y FAC-Neutral Test
- N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 17**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations
Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

N Histosol	Y Concretions
N Histic Epipedon	Y High Organic Content in Surface Layer in Sandy Soils
N Sulfidic	N Organic Streaking in Sandy Soils
Y Aquic Moisture Regime	N Listed on Local Hydric Soils List
Y Reducing Conditions	N Listed on National Hydric Soils List
N Gleyed or Low-Chroma Colors	Y Other (Explain in Remarks)

Remarks: The subsurface in the wetland area consists of unconsolidated bottom. Soil is a mixture of nonindigenous silt, sand, and gravel with scattered traces of landfill waste throughout. No discernible horizons were evident.

WETLAND DETERMINATION

	(Circle)			(Circle)	
Hydrophytic Vegetation Present?	(Yes)	No			
Wetland Hydrology Present?	(Yes)	No			
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	(Yes)	No

Remarks:

Conestoga-Rovers & Associates

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)
SAMPLE LOCATION 18

Project/Site:	North Sanitary Landfill Site			Date:	4/24/01
Applicant/Owner:	VLSG			County:	Montgomery
Investigator:	Charles E. Jones			State:	Ohio
Do Normal Circumstances exist on the site?		Yes	(No)	Community ID:	N/A
Is the site significantly disturbed (Atypical Situation)?		(Yes)	No	Transect ID:	N/A
Is the area a potential Problem Area?		Yes	(No)	Sample Location:	18
(If needed, explain on reverse.)					

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. *Potentilla simplex*	H	FACU-	9. *Cirsium vulgare*	H	FACU-
2. *Lamium purpureum*	H	NL	10. *Stellaria media*	H	UPL
3. *Geranium maculatum*	H	FACU	11.		
4. *Taraxacum officinale*	H	FACU-	12.		
5. *Trifolium repens*	H	FACU-	13.		
6. *Melilotus officinalis*	H	FACU-	14.		
7. *Lolium perenne*	H	FACU-	15.		
8. *Poa annua*	H	FACU	16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0

T = Tree, S = Shrub or Sapling, WV = Woody Vine, H = Herbaceous, and NL = Not Listed

Remarks: Typical nonhydrophytic species composition observed over most of the vegetated nonwetland areas of the site.

HYDROLOGY

X Recorded Data (Describe in Remarks):

____ Stream, Lake, or Tide Gauge
X Aerial Photographs
X Other

___ No Recorded Data Available

Field Observations:

Depth of Surface Water: 0 (in.)
Depth of Free Water in Pit: 0 (in.)
Depth to Saturated Soil: >12 (in.)

Wetland Hydrology Indicators:

Primary Indicators:
N Inundated
N Saturated in Upper 12 inches
N Water Marks
N Drift Lines
N Sediment Deposits
N Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
N Oxidized Root Channels in Upper 12 inches
N Water-Stained Leaves
N Local Soil Survey Data
N FAC-Neutral Test
N Other (Explain in Remarks)

Remarks: Other = USGS topographic map, USDI National Wetland Inventory map, previous site investigations.

Conestoga-Rovers & Associates

SOILS **SAMPLE LOCATION 18**

Map Unit Name (Series and Phase): Made Land

Drainage Class: N/A

Field Observations Confirm Mapped Type? (Yes) No

Taxonomy (Subgroup): N/A

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
	N/A	Varies	Varies	Varies	Varies

Hydric Soil Indicators:

N Histosol	Y Concretions
N Histic Epipedon	N High Organic Content in Surface Layer in Sandy Soils
N Sulfidic	N Organic Streaking in Sandy Soils
N Aquic Moisture Regime	N Listed on Local Hydric Soils List
N Reducing Conditions	N Listed on National Hydric Soils List
N Gleyed or Low-Chroma Colors	Y Other (Explain in Remarks)

Remarks: The subsurface in the area consists of unconsolidated gravel, sand, and silt, with scattered traces of landfill waste throughout. No discernible horizons were evident.

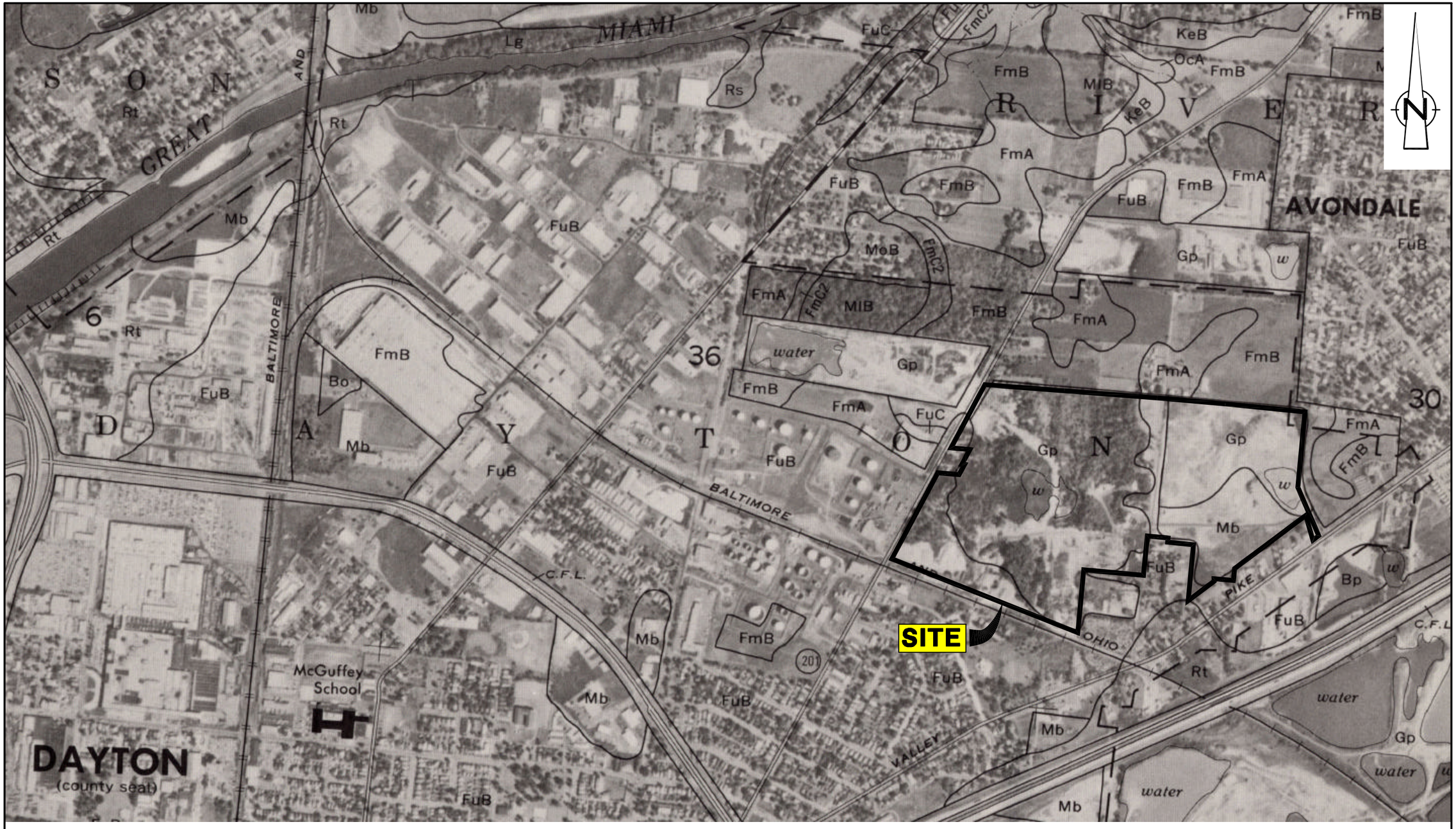
WETLAND DETERMINATION

	(Circle)			(Circle)
Hydrophytic Vegetation Present	Yes	(No)		
Wetland Hydrology Present?	Yes	(No)		
Hydric Soils Present?	Yes	(No)	Is this Sampling Point Within a Wetland?	Yes (No)

Remarks:

EXHIBIT 1

SOIL SURVEY



LEGEND

Gp	GRAVEL PITS
Mb	MADE LAND
FuB	FOX-URBAN LAND COMPLEX
w	WATER

RE: "SOIL SURVEY OF MONTGOMERY COUNTY, OHIO," ISSUED JUNE 1976 AND CRA FIELD NOTES.

0 400 800ft

exhibit 1

SOIL SURVEY MAP
WETLAND DELINEATION
NORTH SANITARY LANDFILL
Valleycrest, Dayton, Ohio

16816-10(002)GN-BR003 MAY 30/2001

EXHIBIT 2

NATIONAL WETLANDS INVENTORY MAP

LEGEND

PEMC	PALUSTRINE EMERGENT SEASONALLY FLOODED
PEMF	PALUSTRINE EMERGENT SEMI-PERMANENTLY FLOODED

0 400 800ft

RE: "NATIONAL WETLANDS INVENTORY, DAYTON NORTH, OHIO," ACCEPTED OCTOBER 1993 AND CRA FIELD NOTES.

exhibit 2

NATIONAL WETLANDS INVENTORY MAP
WETLAND DELINEATION
NORTH SANITARY LANDFILL
Valleycrest, Dayton, Ohio

16816-10(002)GN-BR003 MAY 30/2001

EXHIBIT 3

APRIL 26, 2000 AERIAL PHOTOGRAPH

CRA

Exhibit 3

Date of Photography 26 April 2000

500 0 500 1000 Feet

1:4800

16816(10)BR001

May 30, 2001

PHOTOGRAPHS 1 THROUGH 18

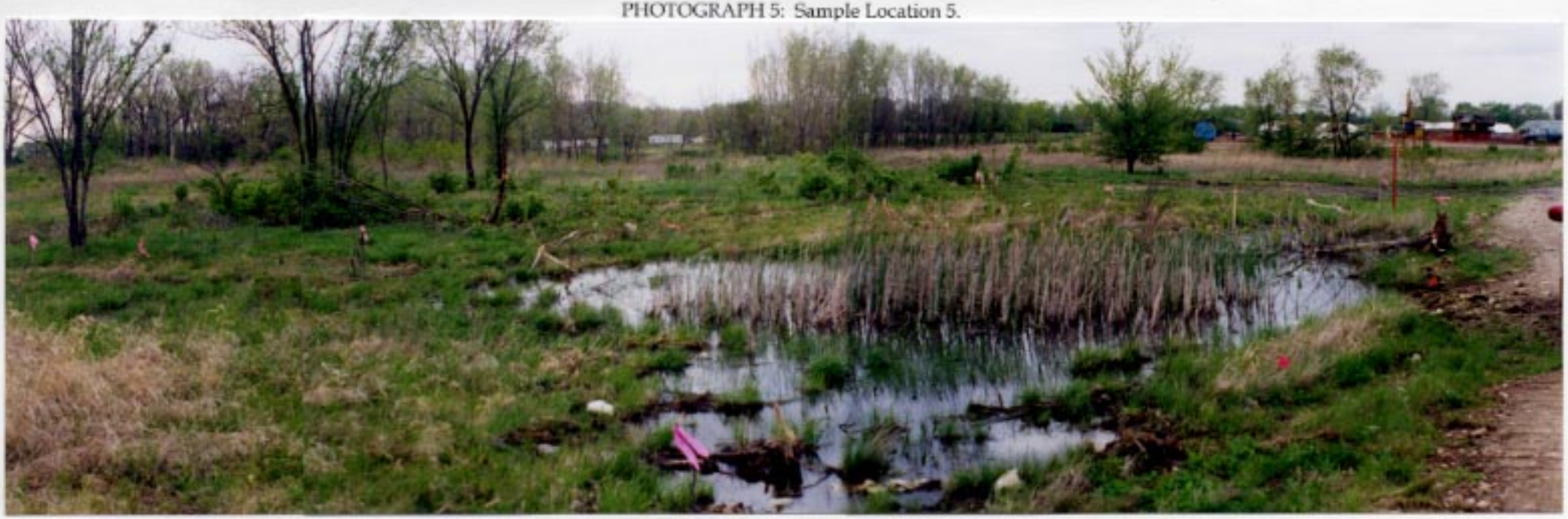
PHOTOGRAPH 1: Sample Location 1.

PHOTOGRAPH 2: Sample Location 2.

PHOTOGRAPH 3: Sample Location 3.

PHOTOGRAPH 4: Sample Location 4.

PHOTOGRAPH 5: Sample Location 5.



PHOTOGRAPH 6: Sample Location 6.

PHOTOGRAPH 7: Sample Location 7.

PHOTOGRAPH 8: Sample Location 8.

PHOTOGRAPH 9: Sample Location 9.

PHOTOGRAPH 10: Sample Location 10.

PHOTOGRAPH 11: Sample Location 11.

PHOTOGRAPH 12: Sample Location 12.

PHOTOGRAPH 13: Sample Location 13.

PHOTOGRAPH 14: Sample Location 14.

PHOTOGRAPH 15: Sample Location 15.

PHOTOGRAPH 16: Sample Location 16.

PHOTOGRAPH 17: Sample Location 17.

PHOTOGRAPH 18: Sample Location 18.