ARCADIS

Appendix C

Location Map of Potential Clay Resources

NYSDEC OHMS Document No. 201469232-00006

U.S MILITARY RESERVATION

Youngstown NY National Guard

MODEL CITY FACILITY

MODERN LANDFILL INC.
JOHN LONG POND

NIAGARA PROPERTIES INC./GUARD
PLETCHER POND CLAY POND

BERGEY MINE SITE

MAWHINEY TRUCKING
HELMICH SITE

STELLA NIAGARA
EDUCATIONAL PARK

BARNABITE FATHERS
SEMINARY

LEWISTON-PORTER
CENTRAL SCHOOLS

STEVESON
ELEMENTARY
SCHOOL

Youngstown

Lewiston

Ransomville

Lockport

Ridge

Niagara River

Fourmile Creek

Twelvemile Creek

Sixmile Creek

LEGEND:

★ POTENTIAL CLAY BORROW SOURCE

AREA LOCATION

0 3,500 7,000 Feet

GRAPHIC SCALE

DRAFT

CWM CHEMICAL SERIVCES, LLC
MODEL CITY, NEW YORK

DRAFT ENVIRONMENTAL IMPACT STATEMENT

POTENTIAL CLAY BORROW SOURCES

ARCADIS

FIGURE 1

CITY: ROCH DIV/GROUP: 40 DB: LD: EAL PIC: WP PM: TM: GNG TR:
MODEL CITY 23725.003
Q:\CWM\ModelCity\RevisionsToDEIS\mxd\ClaySource.mxd - 7/22/2009 @ 3:49:05 PM

ARCADIS

Appendix D

Wetland Delineation Report

WASTE MANAGEMENT

CWM CHEMICAL SERVICES, LLC
1550 Balmer Road
P.O. Box 200
Model City, NY 14107
(716) 754-8231
(716) 754-0211 Fax

November 18, 2003

Mr. Gary McDannell
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Mr. Steven Doleski
NYS Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203

Re: Section 404 Permit Application/Section 401 Water Quality Certification
Facility Upgrade Projects

Gentlemen:

CWM has developed plans for three separate upgrade projects at our Model City Facility. The first project involves construction of a new scales and scalehouse area near the main facility entrance for use in transmittal of shipping papers and weighing of incoming and outgoing transportation vehicles. This location will provide improved traffic patterns compared to the existing scales and scalehouse which are located in the central portion of the facility. The new scales and scalehouse are scheduled to be constructed this year.

The second project will construct a new Drum Management Building to provide container storage and consolidate several related site operations, such as the main laboratory, replacing the existing drum building which is over 20 years old. The new Drum Management Building is scheduled to be constructed during 2004. CWM will be submitting a request to modify its 6NYCRR Part 373 Permit for this project to the New York State Department of Environmental Conservation (NYSDEC) in a separate correspondence.

The third project is the construction of a new landfill, designated Residuals Management Unit No. 2 (RMU-2), and the relocation of several operating areas and buildings. RMU-2 will provide replacement land disposal capacity once the capacity of the existing active landfill at the site is exhausted. Construction for RMU-2 is anticipated to begin during 2005. Applications for state and federal permits required for RMU-2 were submitted by CWM on May 15, 2003, to the NYSDEC and United States Environmental Protection Agency (USEPA).

In order to determine the potential impacts to State and Federal wetlands within the areas impacted by these projects, CWM hired Environmental Design & Research, P.C. (EDR) to perform wetlands delineation. A report entitled "Wetland Delineation Report, Western Expansion Area", dated April 2003, was prepared by EDR and submitted on May 15, 2003, by CWM to the U. S. Army Corps of Engineers (ACOE) and the NYSDEC. EDR has determined that there are no NYSDEC regulated wetland impacts associated with these projects, but there are some potential Federal wetlands which could be considered jurisdictional waters of the United States by the ACOE. In a September 10, 2003, letter, the ACOE verified the Federal wetland boundaries, as shown on the wetlands delineation maps contained in the EDR report.

As specified in the EDR report, this project will impact existing Federal wetlands and existing man-made roadside ditches which exhibit wetland characteristics. The ditches have been constructed and operated as part of the facility's stormwater management system, as required by the NYSDEC. The ACOE has determined that these existing wetlands and roadside ditches are jurisdictional.

Mr. Gary McDannell
U.S. Army Corps of Engineers
Mr. Steven Doleski
NYSDEC
November 18, 2003
Re: Section 404 Permit Application/Section 401 Water Quality Certification
Facility Upgrade Projects

The following table summarizes the impacts associated with each of the three projects:

	Wetlands	Ditches	Total
Scales and Scalehouse Area	0.10 acres	0.05 acres	0.15 acres
Drum Management Building	0.18 acres	0.00 acres	0.18 acres
RMU-2 Project	0.38 acres	0.84 acres	1.22 acres
Total	0.66 acres	0.89 acres	1.55 acres

Attached please find a Joint Application for Permit, Form #95-19-3, which requests a Section 404 Permit from the ACOE for the total wetland and ditch impacts associated with the three projects. In addition, a Section 401 Water Quality Certification is being requested from the NYSDEC, if it is determined that one is required for these projects.

CWM proposes to mitigate the loss of the roadside ditches by constructing new, similarly designed and operated ditches near the existing ditch location as part of project construction. The new ditches will provide the same function and serve the same stormwater runoff control purpose as the existing ditches which are being replaced by the projects. Mitigation for the relatively minor Federal wetland impact caused by these projects can not be feasibly provided through creation of new replacement wetlands either onsite or offsite, as explained in the attached application. CWM proposes to provide mitigation through a donation in the amount of $30,000 to the Buffalo Audubon Society to assist in their efforts to establish a Birds of Prey Center in Niagara County. This environmentally beneficial project is anticipated to include various exhibits, bird enclosures, flight areas, native habitats, ponds, walking trails and educational elements. The amount of the proposed donation is consistent with a previous mitigation donation made by CWM for the Birds of Prey Center, adjusted for the relative amount of wetland impact (ref. April 28, 2003, letter, J. Knickerbocker to H. Adams).

CWM would greatly appreciate an expeditious review of the attached information and permit issuance to enable CWM to meet the project construction schedules stated above. It should be noted that CWM has already initiated the portion of construction for the scales and scalehouse project which impacts the man-made ditches based on verbal direction from the ACOE. All other wetlands and ditches have not yet been impacted.

If you have any questions or comments, please call Mr. John B. Hino at (716) 754-0278 or myself at (716) 754-0246.

Mr. Gary McDannell
U.S. Army Corps of Engineers
Mr. Steven Doleski
NYSDEC
November 18, 2003
Re: Section 404 Permit Application/Section 401 Water Quality Certification
Facility Upgrade Projects

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Sincerely,
CWM CHEMICAL SERVICES, LLC

Jill A. Knickerbocker
Technical Manager
Model City Facility

JBH/JAK/jbh
Attachment

cc:	J. Dietz	- NYSDEC/Region 9	- W/O Attachment
	J. Strickland	- NYSDEC/Region 9	- W/O Attachment
	B. Rostami	- NYSDEC/Region 9	- W/Attachment
	E. Dassatti	- NYSDEC/Albany, NY	- W/Attachment
	J. Sacco	- NYSDEC/On-site Monitor	- W/O Attachment
	J. Reidy	- USEPA/Region II	- W/O Attachment
	J. Devald	- NCHD/Lockport, NY	- W/O Attachment
	R. Sturges	- CWM/Model City, NY	- W/O Attachment
	J. Hino	- CWM/Model City, NY	- W/Attachment
	S. Rydzyk	- CWM/Model City, NY	- W/O Attachment
	J. Hecklau	- EDR/Syracuse, NY	- W/O Attachment
	EMD Subject File		
	Q & A		

WASTE MANAGEMENT

CWM CHEMICAL SERVICES, LLC
1550 Balmer Road
Model City, NY 14107
(716) 286-1550
(716) 286-0211 Fax

July 6, 2009

Mr. Harold Keppner
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Re: Request for Jurisdictional Determination

Dear Mr. Keppner:

On May 15, 2003, CWM Chemical Services, LLC, Model City Facility (CWM) submitted a wetlands delineation report to the U. S. Army Corps of Engineers, Buffalo District (Corps), for potential impacts associated with future construction of a new landfill, designated Residuals Management Unit No. 2 (RMU-2). At that time CWM also submitted a 6NYCRR Part 373 Permit Application to the New York State Department of Environmental Conservation (NYSDEC) which is still pending. Due to the anticipated timing of the NYSDEC review and subsequent projected construction schedule, the Corps temporarily suspended processing of the wetlands evaluation.

CWM has hired Environmental Design & Research, P.C. (EDR) to update the wetlands delineation to determine potential impacts to State and Federal wetlands associated with the RMU-2 project. The attached report entitled "Wetland Delineation Report, RMU-2 Landfill Expansion Area", dated June 2009, prepared by EDR, contains the results of this wetlands evaluation. The attached report replaces the 2003 report in its entirety. RMU-2 and associated project areas are situated within previously developed locations of the CWM Model City Facility. EDR has determined that there are no NYSDEC regulated wetlands associated with any of these project areas. The potential for impacts to Federally regulated wetlands consists of three man-made wastewater treatment ponds, man-made roadside ditches used for stormwater management and isolated pockets with minimal wetland function. As such, it is likely that there will be only minor impact to any jurisdictional Waters of the U. S.

CWM is anticipating that the NYSDEC review of the Part 373 Permit Application will be progressing over the next several months. Therefore, a resumption of the wetlands evaluation is appropriate at this time. CWM would greatly appreciate an expeditious review of the attached wetlands delineation report and issuance of a jurisdictional determination. CWM welcomes the opportunity to meet with the Corps and tour all of the project areas at your earliest convenience in order to facilitate the Corps' jurisdictional determination.

Please call Mr. John B. Hino at (716) 286-0278 or myself at (716) 286-0246 to schedule a site visit and if you have any questions or comments.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Mr. Harold Keppner
U.S. Army Corps of Engineers
July 6, 2009
Re: Request for Jurisdictional Determination

Sincerely,
CWM CHEMICAL SERVICES, LLC

Jill A. Banaszak
Technical Manager
Model City Facility

JBH/JAB/jbh
Attachment

cc:	S. Doleski	- NYSDEC/Region 9	- W/O Attachment
	J. Dietz	- NYSDEC/Region 9	- W/O Attachment
	J. Strickland	- NYSDEC/Region 9	- W/O Attachment
	B. Rostami	- NYSDEC/Region 9	- W/Attachment
	R. Phaneuf	- NYSDEC/Albany, NY	- W/O Attachment
	M. Mortefolio	- NYSDEC/Albany, NY	- W/Attachment
	P. Kutlina	- NYSDEC/On-site Monitor	- W/Attachment
	J. Reidy	- USEPA/Region II	- W/O Attachment
	J. Devald	- NCHD/Lockport, NY	- W/Attachment
	M. Mahar	- CWM/Model City, NY	- W/O Attachment
	R. Zayatz	- CWM/Model City, NY	- W/O Attachment
	J. Hino	- CWM/Model City, NY	- W/Attachment
	S. Rydzyk	- CWM/Model City, NY	- W/O Attachment
	J. Hecklau	- EDR/Syracuse, NY	- W/O Attachment
	EMD Subject File		
	Q&A		

Wetland Delineation Report

RMU-2 Landfill Expansion Area

CWM Chemical Services Property
Town of Porter
Niagara County, New York

Prepared For:

CWM Chemical Services
1550 Balmer Road
Model City, NY 14107

Prepared By:

Environmental Design & Research, Landscape Architecture, Planning
Environmental Services, Engineering and Surveying, P.C.
274 North Goodman Street
Rochester, New York 14607

June 2009

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

1.0 INTRODUCTION

1.1 Project Site Description

At the request of CWM Chemical Services (CWM), Environmental Design & Research, Landscape Architecture, Planning, Environmental Services, Engineering and Surveying, P.C. (EDR), investigated four areas of land, totaling approximately 64 acres, for the purposes of identifying and delineating all wetlands and streams in or nearby the footprint of a proposed landfill expansion (Residuals Management Unit 2 [RMU-2]) and related facilities. These four areas of investigation (hereafter referred to as the Project Area) are located within the working portion of CWM's Model City facility, in the Town of Porter, Niagara County, New York (see Figures 1 and 2, Appendix A). The CWM facility is located at 1550 Balmer Road in an area zoned M-3 for waste management operations. The CWM facility is bordered by Balmer Road to the north, Porter Center Road to the east, the Modern Disposal Services, Inc. Municipal Landfill to the south, and disturbed but presently undeveloped woodlands to the west. The facility is also surrounded by rural residential areas, agricultural lands, and a United States National Guard training area to the north (immediately north of Balmer Road). A description of the four areas (the Project Area) to be utilized by CWM as a part of the RMU-2 landfill expansion is located below.

Area 1, located west of Porter Center Road and east of the active landfill Residuals Management Unit 1 (RMU-1) (see Figure 2), is an approximately 3.6 acre area that currently is maintained as a successional, old-field community through regular mowing. It is the proposed location of a new Drum Management Building. This building will replace the current Drum Management Building, which is in the footprint of the proposed RMU-2 landfill expansion. The new building will include a truck unloading ramp, drum storage warehouse, laboratory, and offices (Hino, pers. comm., 2009).

Area 2, located on the north central portion of the Site (Figure 2), is an approximately 6.4 acre area that is also a regularly mowed, old-field community. It is proposed to be the location of Facultative (Fac) Pond 5. The Fac Ponds are man-made reservoirs constructed to store treated waste water. The water is tested prior to release to the Niagara River via a piped discharge (SPDES Permit # NY 0072061). Proposed Fac Pond 5 will be used for the storage of treated wastewater transferred from existing Fac Pond 1/2, and will serve as the final qualification pond prior to discharge to the Niagara River, replacing existing Fac Pond 3 which will be removed as part of the RMU-2 development (Hino, pers. comm., 2009).

Area 3, located on the southwestern portion of the Site is an approximately 5.1 acre area, and is currently the location of Fac Pond 1/2 (Figure 2). This Fac Pond receives treated wastewater from the on-Site Aqueous Wastewater Treatment facility for temporary holding prior to transfer to the final qualification pond. As part of the proposed expansion, Fac Pond 1/2 will be enlarged during the RMU-2 project by raising the existing perimeter berms and eliminating the center berm. The proposed modifications to Fac Pond 1/2 will occur entirely within the boundaries of Area 3 (Hino, pers. comm., 2009).

Area 4, located in the central portion of the Site (Figure 2), is an approximately 50-acre area proposed to be the future site of the RMU-2 landfill, a perimeter access road, and a new Full Trailer Park (Hino, pers. comm.). This area currently contains portions of the internal access road system, various structures and buildings, road-side ditches, and Fac Ponds 3 and 8. Ditches in this (and the other areas evaluated) are part of a man-made stormwater management system that conveys surface water run-off from the roads and other on-Site facilities to Four Mile Creek, located west of the Site.

1.2 Purpose

The purpose of this study was to determine the presence of state and/or federal jurisdictional wetlands and streams within the Site boundaries. The work performed for this study included background data collection, field delineation (flagging) of potentially jurisdictional wetland and stream boundaries during the Spring of 2009, data gathering at wetland and upland sample points along the delineated wetland and stream boundaries, and compiling a detailed description of those jurisdictional areas based on hydrology, vegetation, and soils data collected on-Site.

This report describes the results of the 2009 delineation and data collection efforts conducted by EDR, as well as a description of the wetlands and streams that were identified and delineated. This document is intended to provide all necessary information to allow a jurisdictional determination by, and if necessary support a Joint Application for Permit to, the United States Army Corps of Engineers (USACE) and the New York State Department of Environmental Conservation (NYSDEC).

1.3 Resources

Data and literature supporting this investigation have been obtained from a number of sources including United States Geological Survey (USGS) topographic mapping (Ransomville 7.5-minute quadrangle), United States Fish and Wildlife Service (USFWS),

National Wetlands Inventory (NWI) mapping, NYSDEC Freshwater Wetlands mapping, the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey of Niagara County, New York (1972), and recent (2005) natural color aerial photography obtained from the New York State Geographic Information System (GIS) Clearinghouse (http://www.nysgis.state.ny.us/gateway/mg/nysdop_download.cfm).

Vascular plant names follow nomenclature found in Gleason and Cronquist (1991). Wetland indicator status for vegetative species was determined using Reed (1988). Wetlands were characterized according to the wetlands and deepwater habitats classification system used in NWI mapping (Cowardin et. al., 1979).

1.4 Qualifications

EDR wetland ecologists Bill Trembath and Brian Schwabenbauer performed the on-Site delineation on April 27, 28, and 29, 2009.

Mr. Trembath is an environmental scientist with 20 years of professional experience in wetland delineations, SEQRA compliance, state and federal wetland permitting, wetland mitigation design and monitoring, environmental impact analysis, and ecological surveys. He has served as project manager for a variety of wetland delineation and regulatory compliance projects in New York State. As a Project Manager with EDR, he has prepared numerous Phase 1 Environmental Site Assessments, wetland delineation reports, and wetland mitigation area monitoring reports.

Mr. Schwabenbauer is an environmental analyst with over 8 years of experience in the environmental field. He received a bachelor's degree in environmental studies from Hobart College, and a master's degree in environmental policy from SUNY College of Environmental Science and Forestry. Professional expertise includes GPS surveying and mapping, GIS data analysis, wetland delineations, environmental impact analysis, and SEQRA compliance.

2.0 REGULATORY AUTHORITIES AND PERMITS

The USACE and NYSDEC regulate various activities in or adjacent to wetland and stream areas that are under their jurisdiction. Below is a description of the agencies' jurisdiction and permit policies.

2.1 Waters of the United States

The Clean Water Act was established to regulate impacts to waters of the United States and regulate water quality standards. Any proposed action that would alter or disturb the "waters of the U.S.," such as dredging or filling, are regulated under Section 404 of the Clean Water Act, and the USACE must review and issue a permit for any such proposed action.

As defined by the USACE, waters of the U.S. include all lakes, ponds, streams (intermittent and perennial), and wetlands. Section 404 of the Clean Water Act, defines jurisdictional wetlands as "those areas that are inundated or saturated by surface or ground water 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" (EPA, 2001). The occurrence of such areas is determined by the presence of three criteria: hydrophytic vegetation, hydric soils, and evidence of wetland hydrology during the growing season (Environmental Laboratory, 1987). However, as a result of the Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers Supreme Court case (No. 99-1178; January 9, 2001), it has been determined that the USACE does not have jurisdictional authority over waters that are "non-navigable, isolated, and intrastate" (EPA, 2001).

More recently, the Supreme Court decided *U.S. v. Rapanos*, (547 U.S., June 19, 2006), in which it held in two consolidated cases (the other one was *Carabell*) that the USACE misinterpreted the Clean Water Act in determining its jurisdiction over wetland protection. On June 5, 2007 the Environmental Protection Agency (EPA) and the Department of Army (DOA) issued Clean Water Act jurisdiction guidance following the Supreme Court's decision in Rapanos and Carabell. A summary of this guidance is as follows:

The agencies will assert jurisdiction over the following waters:

- Traditional navigable waters
- Wetlands adjacent to traditional navigable waters
- Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)

- Wetlands that directly abut such tributaries

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have significant nexus with a traditional navigable water:

- Non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to non-navigable tributaries that are not relatively permanent
- Wetlands adjacent to, but that do not directly abut, a relatively permanent non-navigable tributary

The agencies generally will not assert jurisdiction over the following features:

- Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow)
- Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water

The agencies will apply the significant nexus standard as follows:

- A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters
- Significant nexus includes consideration of hydrologic and ecologic factors

Section 401 of the Clean Water Act (CWA) requires that any applicant for a Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate. Section 401 gives New York State the authority to grant, deny, or condition certification of Federal permits or licenses (e.g., CWA Section 404 permits issued by the U.S. Army Corps of Engineers, Federal Energy Regulatory Commission licenses, some Rivers and Harbors Act Sections 9 and 10 permits, and CWA Section 402 permits where issued by EPA) that may result in a discharge to "waters of the U.S." Such action is taken by the State to ensure compliance with various provisions of the CWA.

Section 10 of the Rivers and Harbor Act (33 U.S.C. 401 *et seq.*) requires a permit from the USACE to construct any structure in or over any navigable water of the United States, as well as any proposed action that would alter or disturb these waters (such as

excavation/dredging or deposition of materials). If the proposed structure or activity affects the course, location, condition, or capacity of the navigable water, even if the proposed activity is outside the boundaries of the water body, a permit from the USACE is required.

2.2 New York Freshwater Wetlands and Protected Streams

The New York State Freshwater Wetlands Act (Article 24 and Title 23 of Article 71 of the Environmental Conservation Law) gives the NYSDEC jurisdiction over state-protected wetlands and adjacent areas (100-foot upland buffer). The Freshwater Wetlands Act requires the NYSDEC to map all state-protected wetlands to allow landowners and other interested parties a means to determine where state jurisdictional wetlands exist. To implement the policy established by this Act, regulations were promulgated by the state under 6 NYCRR Parts 663 and 664. Part 663 of the regulations 1) defines the procedural requirements to be followed in undertaking different activities in wetlands and in areas adjacent to wetlands; 2) establishes standards governing the issuance of permits by the Department pursuant to the Act; and 3) governs the Department's implementation of the Act. Part 664 of the regulations designates wetlands into four class ratings, with Class I being the highest or best quality wetland and Class IV being the lowest. In general, wetlands regulated by the state are those 12.4 acres in size or larger. Smaller wetlands can also be regulated if they are considered of unusual local importance. A 100-foot adjacent area around the delineated boundary of any state-regulated wetland is also under NYSDEC jurisdiction. An Article 24 permit is required from the NYSDEC for any disturbance, including removing vegetation, to a state-protected wetland or an adjacent area (with a few exceptions that do not pertain to CWM's current work or proposed landfill expansion).

Under Article 15 of the Environmental Conservation Law (Protection of Waters), the NYSDEC has regulatory jurisdiction over any activity that disturbs the bed or banks of protected streams. In addition, small lakes and ponds with a surface area of 10 acres or less, located within the course of a protected stream, are considered to be part of a stream and are subject to regulation under the stream protection category of Article 15. Protected stream means any stream, or particular portion of a stream, that has been assigned by the NYSDEC any of the following classifications or standards: AA, AA(t), A, A(t), B, B(t) or C(t/ts) (6 NYCRR Part 701). A classification of AA or A indicates that the best use of the stream is as a source of water supply for drinking, culinary or food processing purposes; primary and secondary contact recreation; and fishing. The best usages of Class B waters are primary and secondary contact recreation and fishing. The best usage of Class C waters is fishing.

Streams designated (t) indicate that they support trout, and also include those more specifically designated (ts) which support trout spawning. State water quality classifications of unprotected watercourses include Class C and Class D streams. Waters with a classification of D are suitable for fishing and non-contact recreation. An Article 15 permit is not required for disturbance to an un-protected stream.

3.0 EXISTING CONDITIONS

3.1 Physiography and Soils

The Site is located within the Ontario Plain section of the Central Lowland physiographic province of New York. The Ontario Plain extends from the shore of Lake Ontario to the foot of the Niagara Escarpment. Elevation of this province within Niagara County ranges from 250 feet above mean sea level (amsl) along the lakeshore to 390 feet amsl located at the base of the Niagara Escarpment located in the Town of Lewiston, New York (NRCS, 1972). Topography on the Site varies from 370 feet amsl in the northeastern portion of the Site on top of a closed landfill, to approximately 290 feet amsl throughout the majority of the Site (Figure 3).

Based on available soils mapping for Niagara County (NRCS, 1972), the four areas of investigation on Site are underlain by three soil series: Made land, Madalin silt loam, and Ovid silt loam (Figure 4). One soil series within the Site is classified as hydric (Madalin silt loam) and one soil (Ovid silt loam) has the potential for hydric inclusions, according to the USDA NRCS (NRCS, 1989 and 2008). Table 1 below presents detailed information for all of the soils listed as occurring within the four areas of investigation on Figure 4. However, it should be noted that soil conditions have changed significantly since the County Soil Survey was published in 1972. Many of the areas evaluated in this investigation have subsequently been converted to additional made land through landfill-related activities. The majority of the soils examined during the delineation effort would be accurately classified as "made land" based on Soil Survey mapping or disturbance/alteration that has occurred on-Site since publication of the Soil Survey in 1972. EDR wetland biologists took this into consideration during their wetland delineation efforts.

Table 1. Site Soils.[1]

Series	Subgroup	Mapping Unit	Slope (%)	Drainage [3]	Landscape Position	Noted Hydrology [4]	Depth to Seasonal High Water Table (ft)	Hydric Soil [5]
Made land [2]	N/A	Me	N/A	N/A	N/A	N/A	N/A	N/A
Ovid silt loam	mesic Aeric Endoaqualfs	OvA	0-2	SPD	Located in large, nearly level areas that normally are near the beds of old post-glacial lakes	Potential for surface runoff is very high to high	0.5 - 1	No
Madalin silt loam	mesic Mollic Endoaqualfs	Ma	0-2	PD-VPD	Occurs on broad flats or in narrow drainage ways in the basins of old glacial lakes	Most areas receive runoff from higher elevations and lack natural outlets	0 - 0.5	Yes
Madalin silt loam (with a loamy subsoil variant)	mesic Mollic Endoaqualfs	Md	0-2	PD-VPD	Occur in or adjacent to areas that were formally glacial lakes	Most areas receive runoff from higher elevations and lack natural outlets	0 – 0.5	Yes

[1] Unless otherwise noted, information derived from the Soil Survey of Niagara County, New York (NRCS, 1972).
[2] Made land lacks the normal characteristics of classifiable soil series and therefore lacks soil series description data.
[3] Soil drainage is represented by the following abbreviations: "VPD" = very poorly drained, "PD" = poorly drained, "SPD" = somewhat poorly drained, "MWD" = moderately well drained, "WD" = well drained, "SED" = somewhat excessively drained, and "ED" = excessively drained.
[4] Hydrology information obtained from USDA-NRCS Soil Survey Division, Official Soil Series Descriptions (http://ortho.ftw.nrcs.usda.gov/cgi-bin/osd/osdname.cgi).
[5] According to *Hydric Soils of the State of New York* (NRCS, 2008).

3.2 Hydrology

The Site is located in the Great Lakes Drainage Basin and is part of USGS Hydrologic Unit 04120104 of the Niagara River Watershed. In Niagara County, total annual liquid precipitation is approximately 36 inches (National Weather Service Website, 2009). Wetland hydrology on-Site appears to be generated primarily by precipitation and surface runoff from adjacent upland areas, including numerous buildings and impervious surfaces throughout the CWM Model City facility. Surface water drains primarily into a series of ditches and drainage features on-Site. These are part of the previously mentioned man-made stormwater management system that conveys surface water runoff from the Site to Four Mile Creek, which discharges into Lake Ontario north of the Site.

3.3 Vegetation

The four areas of investigation consist largely of previously disturbed/developed land, and therefore lack significant areas of natural vegetation. The majority of the vegetation within the four areas of investigation can be characterized as maintained (regularly mowed) old-fields. There are also small patches of maintained lawns, deciduous forestland and shrubland vegetative communities. In addition, some small wetland vegetative communities were observed as well, and are discussed in detail in Section 4.2 below.

3.4 Federal and State Mapped Wetlands and Streams

Review of NYS Freshwater Wetland mapping indicates that there are no NYSDEC mapped or regulated (under Article 24) wetlands within the Site boundaries. The nearest state regulated wetlands are Wetland RV-8 and RV-1, located off Site to the northeast and south, respectively (Figure 5).

Review of NWI mapping indicates that there are multiple portions of different federally mapped wetlands/waters on the CWM Model City property (Figure 6). However, only three federally mapped waters occur within the four areas of investigation (one in Area 3 and two in Area 4). All these wetlands are classified as PUBKHx (Palustrine, Unconsolidated Bottom, Artificially Flooded, Permanently Flooded, and Excavated) and correspond to previously described Fac Ponds 1/2, 3 and 8. One additional federally mapped wetland, identified as PFO1/4Bd (Palustrine, Forested, Broad-Leaved Deciduous, Forested, Needle-Leaved Evergreen, Saturated, Partially Drained/Ditched) corresponds with the location of EDR Delineated Wetland A (see discussion of Wetland A in Section 4.2.1).

There is only one mapped stream within the four areas of investigation at the CWM Model City facility, and it passes through the eastern portion of Area 4. It is an unnamed tributary of Four Mile Creek, and is classified as an unprotected Class C stream (Figure 7). This stream corresponds with EDR Delineated Wetland J and is located immediately west of the active portion of the RMU-1 landfill. It currently serves as a part of the stormwater management system, conveying surface water through a series of culverts before out-letting off-Site to Four Mile Creek and eventually Lake Ontario (see discussion in 4.2.1).

There are no waters regulated under Section 10 of the Rivers and Harbors Act of 1899 (navigable waters) within or adjacent to the Site.

4.0 ON-SITE JURISDICTIONAL AREA DELINEATION

4.1 Methodology

The determination of wetland and stream boundaries was made by EDR personnel according to the three-parameter (soil, hydrology, and vegetation) methodology described in the *1987 Corps of Engineers Wetland Delineation Manual* (hereafter referred to as the 1987 Manual) (Environmental Laboratory, 1987). Wetland and stream boundaries were defined in the field with sequentially numbered pink surveyor's flagging, and were subsequently surveyed using a backpack Trimble Pro XRS GPS with reported sub-meter accuracy. Delineated wetland figures were created using the wetland GPS survey and GIS base mapping.

Data were collected from upland and wetland sample plots on April 27, 28, and 29, 2009, and were recorded on *Routine Wetland Determination* forms (Appendix B). Data collected for the delineated wetlands included soil characteristics, hydrology indicators, and dominant vegetation. Details of the data collection process are described below. In addition, photographs of the delineated wetlands and streams were obtained during data collection, and are included in Appendix C.

4.1.1 Soils

EDR personnel used a Dutch soil auger to collect upland and wetland soil data at each sampling location to a depth of 16 inches. Information concerning soil texture and matrix and mottle color was obtained from on-Site sampling, while information regarding soil series, subgroup, and drainage classification was obtained from existing data sources (NRCS, 1972). Areas of made land that are different from those mapped in the Niagara County Soil Survey were noted during the field review and subsequent data collection. This information was used to determine whether the soils displayed hydric characteristics. Hydric soils are those that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil layer. Hydric soils are poorly drained, and their presence is indicative of the likely occurrence of wetlands (Environmental Laboratory, 1987). Hydric soils were determined in the field through observation of composition, color, and morphology. Soil colors were determined by consulting *Munsell Soil Charts* (Kollmorgen Corp., 2000).

4.1.2 Hydrology

The 1987 Manual lists the following indicators as evidence of wetland hydrology (in order of decreasing reliability): (1) visual observation of inundation, (2) visual observation of soil saturation, (3) water marks, (4) drift lines, (5) sediment deposits, and (6) drainage patterns. Hydrologic characteristics (inundation and soil saturation) were visually assessed to a depth of 12 inches. The hydrology indicators described above are considered "primary indicators," and any one of these indicators is sufficient evidence that wetland hydrology is present. In addition, "secondary indicators" used by EDR personnel included: (1) oxidized root channels in the upper 12 inches of soil, (2) water-stained leaves, (3) local soil survey data, and (4) morphological plant adaptations. Any two of these also indicate the presence of wetland hydrology.

4.1.3 Vegetation

The vegetative data collection process focused on dominant plant species in four categories: trees (>3" diameter at breast height), saplings/shrubs (<3.0" diameter at breast height and >3.2' tall), herbs (<3.2' tall), and woody vines. Dominance was measured by visually estimating those species having the largest relative basal area (trees), greatest height (saplings/shrubs), greatest number of stems (woody vines), and greatest percentage of aerial coverage (herbaceous) by species. Dominant species for each stratum in the plant community were identified for each sample point on the Project Site. The dominant species from each category are defined as those plants with the highest ranking which, when cumulatively totaled, exceeds 50 percent of the total dominance measure for that category, plus any additional plant species comprising 20 percent or more of the total dominance measure for the category. The species were rank ordered for each category by decreasing value of percent cover.

Wetland hydrology, when combined with a hydrophytic plant community and hydric soils, indicate the potential presence of a federal jurisdictional wetland. The boundaries of state jurisdictional wetlands are also generally defined by a dominance of hydrophytic vegetation and coincide with the location of a mapped NYS Freshwater Wetland. However, final jurisdictional determination can only be made by the USACE.

4.2 Results

4.2.1 Wetlands

EDR personnel delineated 15 wetlands on-Site totaling approximately 3.25 acres, only some of which will be impacted by the current design of the RMU-2 project (Table 2). The wetlands delineated on-Site consist of four types, including emergent, emergent/scrub-shrub, emergent/scrub-shrub/forested, and scrub-shrub/forested. However, the majority of the delineated areas are essentially drainage ditches that are part of the man-made stormwater management system. The size and location of the delineated on-Site wetlands are depicted in Appendix A, Figure 8, and representative photos of each wetland type are provided in Appendix C. Descriptions of the wetlands delineated on-Site are presented below. These descriptions are based on data included on the routine wetland determination forms provided in Appendix B. The wetlands are separated according to the portion of the Site (Area 1 – Area 4) within which they were identified.

Area 1

Wetland A

Located just outside the southeast corner of Area 1, the delineated area of Wetland A is approximately 0.23 acre in size and characteristic of an emergent/scrub-shrub wetland community (Figure 8, Sheets 2 and 3). The western portion of this wetland is dominated by silky dogwood *(Cornus amomum)*, willow shrubs *(Salix spp)*, common reed *(Phragmites australis)*, and field horsetail *(Equisetum arvense)* (Appendix C, Photo 5). Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2), concretions, and a texture consistent with clay. Evidence of wetland hydrology at the time of delineation included soil saturation and oxidized root channels in the upper 12 inches of soil, and morphological plant adaptations (hummocky microtopography). It appeared at the time of investigation that Wetland A receives surface runoff from the disturbed old-field located immediately to the north/northwest, and that this wetland extends beyond the delineated portion to the southeast.

Uplands adjacent to Wetland A are characterized as a disturbed upland old-field (mowed) to the north and a forested area (mixed northern hardwood forest/shrub land) to the south and east. Uplands adjacent to Wetland A are distinguished from the wetland by the dominance of upland plant species. Vegetation at the upland sample point for Wetland A was dominated by bluegrass *(Poa spp.)* and fescues *(Festuca spp.)*, with white clover *(Trifolium repens)*, perennial rye grass *(Lolium perenne)* and dandelion *(Taraxacum officinale)* present

as well. There was no evidence of wetland hydrology in these areas, and the 10YR 4/3 silt loam soils did not display hydric characteristics.

Wetland B

Wetland B (0.11 acre) is also located immediately outside the southwest corner of investigation Area 1, approximately 300 feet west of Wetland A, and east of an existing facility access road (Figure 8, Sheets 2 and 3). The delineated area of this wetland is a small portion (the northernmost end) of a man-made stormwater detention basin. The vegetation is dominated by wetland species, specifically common reed, sedges *(Carex spp.)* and soft rush *(Juncus sp.)* (Photo 6). Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) with common high chroma mottles (10YR 5/6), concretions, and a texture consistent with clay. Evidence of wetland hydrology included inundation (up to 3 inches deep), oxidized root channels in the upper 12 inches of soil, and hummocky microtopography. Hydrology in this man-made wetland continues south beyond the delineated area and likely off-Site.

Uplands adjacent to Wetland B are identical to those described for Wetland A, as Wetland B is bordered by an access road to the west and the same disturbed old-field/mowed area to the north/northeast. Therefore, Wetland B shares an upland sample point with Wetland A.

Wetland C

Wetland C is also located just outside of Area 1 to the northeast, and measures 0.13 acre in size (Figure 8, Sheets 2 and 3). Wetland C can be characterized as an emergent/scrub-shrub wetland community. Vegetation within the delineated area of Wetland C is dominated by black willow *(Salix nigra)* trees, willow shrubs, silky dogwood, and common reed (Photo 7). Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and10YR 5/2) with common high chroma mottles (10YR 5/6) and concretions. Signs of hydrology in the wetland consist of saturated soils and oxidized root channels in the upper 12 inches, morphological plant adaptations, and hummocky microtopography. Wetland C continues beyond the delineated area.

The upland areas adjacent to Wetland C are similar to those described previously for Wetland A, as it is bordered by both the disturbed old-field and northern hardwood forest. There was no evidence of wetland hydrology in these areas, and the 10YR 4/3 soils did not display hydric characteristics.

Wetland D

Located just outside of the northwest corner of Area 1, Wetland D is characteristic of an emergent wetland and measures 0.05 acre (Figure 8, Sheets 2 and 3). Wetland D is bounded by an access road to the west, upland forest to the east, and mowed/disturbed field to the south. The vegetation is comprised almost exclusively of common reed (80 to 90 percent), with some sedges, field horsetail, and silky dogwood also present (Photo 8). Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) with common high chroma mottles (10YR 5/6) and concretions. Signs of hydrology at the time of investigation included saturated soils and oxidized root channels in the upper 12 inches, free water at a depth of 4 to 5 inches below the soil surface, and morphological plant adaptations (hummocky microtopography). It appears that this wetland may continue beyond the delineated boundaries to the north.

Adjacent uplands include an access road, disturbed old-field/lawn, and northern hardwood forest. There was no evidence of wetland hydrology in these areas, and the 10YR 4/3 soils did not display hydric characteristics.

Area 2

Wetland G

Located in the northernmost portion of Area 2, Wetland G is approximately 0.41 acre in size and is characteristic of an emergent wetland community (Figure 8, Sheets 4 and 5). Wetland vegetation is made up almost exclusively of common reed and silky dogwood shrubs (at a height of less than 24 inches). Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) and common high chroma mottles (10YR 5/6). Signs of wetland hydrology included inundation (up to 2 inches), oxidized root channels, and hummocks. There is likely hydrologic connectivity between Wetland G and off-Site wetlands via a culvert that passes underneath the access road to the north.

Uplands adjacent to Wetland G are characteristic of a disturbed/regularly-mowed old-field. Vegetation is dominated by fescues and perennial rye grass, with old-field cinquefoil present in smaller amounts. Although the clay soils displayed low chroma matrix color (10YR 5/2) at a depth greater than 14 inches, there was no evidence of wetland hydrology in these areas.

Wetland H

Wetland H is located approximately 40 feet south of Wetland G. It is characteristic of an emergent wetland community and is just 0.04 acre in size (Figure 8, Sheets 4 and 5). Wetland vegetation in this area is dominated by common reed (90 percent) with sedges

present to a lesser degree (10 percent). Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) and common high chroma mottles (10YR 5/6). Signs of wetland hydrology at the time of investigation included saturated soils, a depth to free water of 1 to 2 inches below the soil surface, water stained leaves, and hummocky microtopography. Pockets of standing water 1 to 2 inches deep were also noted. Field observations by EDR wetland biologists suggest that this wetland is isolated and does not display a significant nexus to any other wetlands. While Wetland G is in proximity to Wetland H, there was no apparent hydrological connection and a dominance of upland vegetative species was determined to exist between the two areas.

Upland data for Wetland H were taken from a shared sample point between Wetland H and Wetland G, and is as described in the previous discussion of Wetland G.

Wetland I

Wetland I is essentially a man-made drainage ditch that serves as part of the on-Site stormwater management system. Located in the southeastern corner of Area 2 and measuring 0.10 acre, this wetland collects surface water runoff from the adjacent access road and uplands (Figure 8, Sheets 4 and 5). Characteristic of an emergent wetland community, Wetland I is dominated by common reed, with sedges and field horsetail present as well. Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) and common high chroma mottles (10YR 5/6). Primary indicators of wetland hydrology, including inundation (up to 1 inch), saturation in the upper 12 inches of soil, and drainage patterns, were observed in this wetland. Oxidized root channels were also observed in the upper 12 inches of soil. As mentioned previously, this wetland is part of the stormwater management system, and therefore is hydrologically connected to off-Site wetlands via a series of culverts.

Adjacent uplands are significantly disturbed and characteristic of a maintained (regularly mowed) lawn. The uplands immediately north of Wetland I serve as an empty bulk container storage area for the CWM facility. Vegetation in the uplands is dominated by fescues, white clover, dandelion and orchard grass (*Dactylis glomerata*). There was no evidence of wetland hydrology in these areas, and the 10YR 3/3 soils did not display hydric characteristics.

Area 3

There are no delineated wetlands within or near the footprint of Area 3. Area 3 contains Fac Pond 1/2, which is indicated on the NWI mapping as PUBKHx. This Fac Pond measures approximately 4.7 acres in size. It is an excavated rectangular basin with steep banks and

deep water (5-15 feet). Aquatic and emergent vegetation is minimal in these areas, especially in the open water portions (Photos 1 and 2). However as mentioned previously, this is a man made waterbody constructed for the purposes of storing treated wastewater from the on-Site Aqueous Wastewater Treatment facility prior to its periodic transfer to the final qualification pond as volume dictates (Figure 8, Sheets 6 and 7). No data was collected for this area, as it is considered to be an engineered component of the working CWM solid waste facility, and not a jurisdictional water of the U.S.

Area 4

This area also contains two Fac Ponds (Fac Ponds 3 and 8) and the same circumstances apply as described for Fac Pond 1/2 in Area 3. It should be noted that Fac Pond 8 has been drained and is currently out of service.

Wetland J

Located both east and west of a facility access road, Wetland J is actually comprised of two different wetland communities. Connected by a culvert passing underneath the road, this wetland is characteristic of an emergent/forested community west of the road, and an emergent wetland/drainage ditch east of the road (see Figure 8, Sheets 8 and 9). Approximately 0.47 acre of the delineated area is comprised of the emergent wetland/drainage ditch, and another 0.45 acre is made up of the forested wetland community.

The linear emergent wetland/drainage ditch, flowing from south to the north, is dominated by wetland vegetation including narrow-leaf cattail *(Typha angustifolia)*, broad-leaf cattail *(Typha latifolia)*, and soft rush (Photo 11). Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) and common high chroma mottles (10YR 5/6). EDR personnel also noted concretions in the soil profile. Primary indicators of wetland hydrology, including inundation (up to 3 inches deep), saturation in upper 12 inches of soil, and sediment deposits, were observed in this wetland. Oxidized root channels in the upper 12 inches of soil and water stained leaves were also noted by EDR personnel. At the time of delineation, sheet flow was observed to pass over the access road and into Wetland J in the vicinity of wetland flag J-34 (see Figure 8, Sheets 8 and 9). From there, surface water appeared to flow north through a series of culverts, but it could not be determined whether the water continued beyond the delineated area at the northern terminus of the wetland. It appeared as though the culvert furthest to the north (near wetland flag J-1, see Figure 8, Sheets 8 and 9) was partially filled with sediment and debris. However, this man made ditch

is part of the stormwater management system designed to be hydrologically connected to off-Site wetlands.

Uplands adjacent to this linear portion of Wetland J are significantly disturbed, and include the slope of an inactive landfill to the east and a facility access road to the west. The vegetation observed on the adjacent uplands (on the slope of the landfill) is dominated by fescues, perennial rye grass, dandelion, common vetch (*Vicia sativa*) and teasel (*Dipsacus sylvestris*). There was no evidence of wetland hydrology in these areas, and the 10YR 3/3 and 10YR 4/3 soils did not display hydric characteristics.

The emergent/forested wetland community portion of Wetland J, located west of the facility access road is dominated by red maple (*Acer rubrum*) and green ash (*Fraxinus pennsylvanica*) trees in the overstory, and sedges and soft rush in the herbaceous layer. Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) and common high chroma mottles (10YR 5/6 and 10YR 5/8). Primary indicators of wetland hydrology, including inundation (2 to 3 inches deep), saturation in upper 12 inches of soil, and watermarks on the trees, were observed in this wetland. Oxidized root channels in the upper 12 inches of soil, buttressed tree trunks and water stained leaves were also noted by EDR personnel.

Uplands adjacent to the emergent/forested wetland portion of Wetland J are comprised of mowed lawns and facility access roads. Fescues and perennial rye grass dominate the vegetation in the area. There was no evidence of wetland hydrology in these areas, and although the 10YR 3/3 and 10YR 5/2 soils did display some hydric characteristics, there were no signs of hydrology in the adjacent uplands.

Wetland K

Located along the northern boundary of Area 4, Wetland K is characteristic of an emergent wetland within a drainage channel (Figure 8, Sheets 8 and 9). The delineated portion of this wetland equals approximately 0.07 acre, however, the wetland extends beyond the delineated area and outside of Area 4. Wetland K is dominated by wetland vegetation, including common reed, silky dogwood, and sedges (Appendix C, Photo 12). Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) with common high chroma mottles (10YR 5/6), concretions, and a texture consistent with clay. Evidence of wetland hydrology in the wetland included inundation to a depth of 1 inch, saturated soils in the upper 12 inches, and water-stained leaves. While the wetland extends beyond the delineated area and outside of Area 4, it was considered by EDR ecologists to be potentially

isolated because it was not apparent that there was a significant hydrological connection to other waters of the U.S.

Wetland K is bordered to the east by a paved parking area and to the west by regularly mowed upland areas. The vegetation at the upland sample point was dominated by fescues, with some perennial rye grass, white clover and dandelion present in smaller percentages. There was no evidence of wetland hydrology in these areas, and the 10YR 4/3 soils did not display hydric characteristics.

Wetland L

Wetland L (0.06 acre) is located near the northwestern corner of Area 4, approximately 575 feet southwest of Wetland K. Wetland L is a small emergent wetland that is significantly disturbed (rutted) due to regular mowing. The wetland is dominated by common reed (90 percent), with smaller percentages of sedges and silky dogwood (short shrubs) present as well (Appendix C, Photo 13). Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) with common high chroma mottles (10YR 5/6), concretions, and a texture consistent with clay. Evidence of wetland hydrology included inundation to a depth of approximately 1 inch, saturated soils and oxidized root channels in the upper 12 inches, and hummocky microtopography. It appeared at the time of investigation that Wetland L is potentially isolated, as it is bordered on all sides by areas of higher topography and CWM facilities/buildings.

The uplands adjacent to Wetland L are characteristic of a disturbed/regularly-mowed lawn. Vegetation is dominated by fescues almost exclusively, with smaller percentages of dandelion, orchard grass and timothy present as well. There was no evidence of wetland hydrology in the adjacent uplands, and the 10YR 4/3 soils did not display hydric characteristics.

Wetland M

Wetland M is located in the central portion of Area 4 and measures 0.54 acre in size (Figure 8, Sheets 8 and 9). This wetland displays characteristics of mixed forested, scrub-shrub, and emergent wetland communities, with areas of man-made drainage channels/swales as well (Appendix C, Photo 14). The wetland is dominated by green ash and red maple trees in the forested portions, and cattails, silky dogwood, and sedges in the scrub-shrub/emergent areas. Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) with common high chroma mottles (10YR 5/6 and 10YR 5/8). Evidence of wetland hydrology at the time of investigation included inundation to a depth of approximately 2 inches deep,

saturated soils in the upper 12 inches, water marks on the trees, water-stained leaves, and a slight indication of buttressed tree trunks. Some areas of Wetland M contained pockets of standing water in excess of 12 inches deep. Field observations made by EDR wetland biologists suggest that this wetland receives hydrology from numerous drainage ditches and sheet flow. However, a significant nexus to other wetlands could not be found during the wetland delineation efforts. Therefore, it appears that Wetland M is potentially isolated.

Adjacent uplands include facility access roads, parking areas, disturbed field/lawn, and upland hardwood forest/shrubland. Vegetation is dominated by sugar maple and black cherry trees in the forested uplands, multiflora rose, black raspberry and honeysuckle in the shrublands, and orchard grass, dandelion, and white clover in the mowed lawn areas. There was no evidence of wetland hydrology in these upland areas, and the 10YR 4/4 and 10YR 5/4 soils did not display hydric characteristics.

Wetland N

Located on the western boundary line of Area 4, Wetland N is characteristic of an emergent wetland community with a narrow drainage ditch in the middle of the wetland area. The delineated area of Wetland N measures approximately 0.04 acre, but the wetland extends beyond the delineated area and outside of Area 4 (Figure 8, Sheets 8 and 9). The vegetation in Wetland N is dominated almost exclusively by common reed and sedges (Appendix C, Photo 15). Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) and common high chroma mottles (10YR 5/6 at a depth of 12 inches or more). Primary indicators of wetland hydrology, including saturated soils in the upper 12 inches and watermarks on the vegetation were observed in this wetland. Oxidized root channels in the upper 12 inches of soil, water-stained leaves and small hummocks were also observed. This wetland is part of the stormwater management system, and is therefore hydrologically connected to off-Site wetlands and streams via a series of culverts.

Uplands adjacent to Wetland N are significantly disturbed and consist of a facility access road and regularly mowed lawns. The upland vegetative community is dominated by fescues, perennial rye grass and white clover. There was no evidence of wetland hydrology in these upland areas, and the 10YR 3/3 and 10YR 4/4 soils did not display hydric soil characteristics.

Wetland O

Wetland O is located approximately 300 feet north of Wetland N near the western boundary of Area 4 (Figure 8, Sheets 8 and 9). The delineated portion of Wetland O totals only 0.06

acre, but the wetland community extends beyond the delineated portion in Area 4. The delineated area of Wetland O is split by a facility access road but is hydrologically linked via a culvert. This wetland is characteristic of a drainage ditch with a forested/scrub-shrub wetland community along its banks (Appendix C, Photo 16). At the time of investigation, the drainage ditch west of the access road had an average width of approximately eight to ten feet and a depth of water in the range of 3 - 5 inches. The vegetation within Wetland O is dominated by red maple, green ash and cottonwood in the overstory, with honeysuckle and wild grape in the shrub layer (on the banks of the drainage channel). Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2), common high chroma mottles (10YR 5/6 and 10YR 5/8), and concretions. Primary indicators of wetland hydrology, including saturated soils in the upper 12 inches and inundation (up to approximately one inch deep) were observed in this wetland. Oxidized root channels in the upper 12 inches of soil, water-stained leaves and buttressed tree trunks were also observed. Wetland O is part of the stormwater management system, and is therefore hydrologically connected to off-Site wetlands and streams via a series of culverts.

Adjacent uplands consist of a facility access road between the two delineated areas of Wetland O, as well as an upland forested/scrub-shrub community and a maintained lawn area. Vegetation at the upland data sample point for Wetland O (wetland flag O-16) was dominated by sugar maple and black cherry trees, buckthorn and honeysuckle shrubs, and Canada goldenrod and perennial rye grass in the herbaceous layer. There was no evidence of wetland hydrology in these upland areas, and the 10YR 3/3 and 10YR 4/4 soils did not display hydric characteristics.

Wetland P

Wetland P is located in the central portion of Area 4, immediately north and east of Fac Pond 3 (Figure 8, Sheets 8 and 9). Wetland P contains characteristics of both forested and emergent wetland communities and has an area of 0.42 acre (Appendix C, Photo 17). The eastern portion of Wetland P (adjacent to a facility access road and oriented in a north-south direction) is a roadside drainage channel with an emergent wetland community. The wetland is dominated by green ash and red maple trees in the forested portions, and common reed and sedges in the emergent areas. Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) with common high chroma mottles (10YR 5/6). Evidence of wetland hydrology in the wetland at the time of investigation included inundation to a depth of approximately 1-inch deep, saturated soils and oxidized root channels in the upper 12 inches, water-stained leaves, and a slight indication of buttressing in tree trunks. Some areas of Wetland P contained pockets of standing water in excess of 6 inches deep. Field

observations by EDR wetland biologists suggest that this wetland is an isolated depressional area that receives hydrologic input via sheet flow from the surrounding uplands, and lacks any apparent hydrologic outlets (culverts or drainages).

Adjacent uplands are significantly disturbed and consist of either facility access roads or regularly mowed lawn areas. The vegetative community is dominated by perennial rye grass and white clover. Although there are some clay soils in the adjacent uplands that display low chroma matrix colors (10YR 5/2) at a depth greater than 10 inches, there was no evidence of wetland hydrology in these areas.

Wetland Q

Located approximately 25 feet south of the southern terminus of Wetland P (Figure 8, Sheets 8 and 9), Wetland Q is 0.07 acre in size and characteristic of an emergent/forested wetland community. Woody vegetation in Wetland Q is dominated by red maple and green ash trees, silky dogwood shrubs, while sedges, water plantain, and green algae dominate the herbaceous layer (Appendix C, Photo 18). Evidence of hydric soils includes low chroma matrix colors (10YR 3/2 and 10YR 5/2) with common high chroma mottles (10YR 5/6). Evidence of wetland hydrology included inundation to a depth of approximately 2 inches, saturated soils in the upper 12 inches, water-stained leaves and buttressed tree trunks. At the time of investigation there were some areas of standing water with depths greater than 6 inches deep. Field observations by EDR wetland biologists suggest that this wetland is isolated and does not display a significant nexus to any other wetlands. It appears as though Wetland Q was at one time hydrologically linked to Wetland P via a culvert or sheet flow. However, at this time it appears that a functional connection between these two wetlands no longer exists. While there may be a culvert linking the two wetlands, if it is present, it has been completely buried by sedimentation in recent years. Therefore, as conditions currently exist, Wetland Q appears to be hydrologically isolated from other wetlands.

Uplands adjacent to Wetland Q are significantly disturbed and consist of a facility access road and regularly mowed lawns. The upland vegetative community is dominated by fescues and perennial rye grass. There was no evidence of wetland hydrology in these upland areas, and the 10YR 3/3 and 10YR 4/4 soils did not display hydric characteristics.

Table 2. Delineated Wetlands and Streams

EDR Wetland/Stream ID	Acres Delin-eated	Acres Impacted by RMU-2 Project	Community Type[1]	Federal Jurisdiction (Yes/No) [2]	Acres with Federal Jurisdiction [2]	Acres with Federal Jurisdiction Impacted by RMU-2 [2]	State Jurisdiction (Yes/No)	Stream Name	Stream Class
A	0.23	0.00	EM/SS	Yes	0.23	0.00	No		
B	0.11	0.00	EM	No	0.00	0.00	No		
C	0.13	0.00	EM/SS/FO	Yes	0.13	0.00	No		
D	0.05	0.00	EM	Yes	0.05	0.00	No		
G	0.41	0.41	EM/Drainage	Yes	0.41	0.41	No		
H	0.04	0.04	EM	No	0.00	0.00	No		
I	0.10	0.10	EM/Drainage	Yes	0.10	0.10	No		
J	0.92	0.80	EM/FO/ Drainage	Yes	0.92	0.80	No	Un-named	C
K	0.07	0.05	EM	No	0.00	0.00	No		
L	0.06	0.06	EM	No	0.00	0.00	No		
M	0.54	0.54	EM/SS/FO	No	0.00	0.00	No		
N	0.04	0.02	EM	Yes	0.04	0.02	No		
O	0.06	0.03	SS/FO	Yes	0.06	0.03	No		
P	0.42	0.42	EM	No	0.00	0.00	No		
Q	0.07	0.07	EM	No	0.00	0.00	No		
Total Acres	**3.25**	**2.54**			**1.94**	**1.36**			

[1] Wetland community types noted are based upon the Cowardin et al classification system: EM = emergent marsh; SS = scrub shrub; FO = forested.
[2] Preliminary determinations by EDR. Final jurisdictional determinations to be provided by USACE.

5.0 CONCLUSIONS

The four study areas investigated by EDR within the proposed RMU-2 landfill expansion area at the CWM Model City facility are all significantly disturbed areas within a working solid waste management facility. EDR delineated fifteen wetlands within the four areas of investigation that may be considered jurisdictional waters of the U.S. These wetlands were identified based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology. The delineated areas primarily exhibited an emergent covertype dominated by common reed and sedges, as well as a scrub-shrub cover type dominated by silky dogwood and willows. Only three wetlands identified by EDR personnel included forested covertypes. The wetlands were all characterized by hydric soils and clear indicators of wetland hydrology at the time of Site investigation. Eight of these areas are associated with stormwater management system (SPDES Permit # NY 0072061) and do not offer the structural or functional attributes inherent to natural waters of the U.S.

Even in those areas where the land appears relatively undisturbed, the natural surface water hydrology and/or vegetation have been altered to such an extent that limited wetland functions and values have been retained. Wetlands on the Site do not appear to perform many of the typical functions associated with high quality wetlands. They do not contribute significantly to groundwater recharge and discharge, habitat for waterfowl, or flood abatement. These wetlands also do not provide any opportunities for recreation or education, have no economic value, and do not serve any functions in shoreline erosion control. The only possible functions the on-Site wetlands provide are minimal stormwater detention, some water quality improvement and seasonal breeding habitat for certain amphibians that may occupy the Site.

The three Fac Ponds that occur in Areas 3 and 4 are not considered to be jurisdictional waters of the U.S. No data was collected for these areas, as they are considered engineered components of the working CWM solid waste facility, and not jurisdictional waters of the U.S. Wetland B is a man made stormwater management pond and will therefore not be considered jurisdictional. In addition, EDR's analysis suggests that wetlands H, K, L, M, P and Q will likely not be considered jurisdictional by the USACE due to their lack of connection or adjacency to jurisdictional waters and/or the lack of a "significant nexus" between these wetlands and adjacent wetlands/waters. In several instances, this lack of connectivity resulted from culverts non-functional due to grade issues or burial by sediment. In other cases the topography of the adjacent uplands slopes upward on all sides of the wetland, and provides no obvious outlet that would allow hydrologic connectivity with

other streams or wetlands. As a result, while there may at one time have been a hydrological connection between these on-Site wetlands and other wetlands/waters, it is the opinion of EDR wetland biologists that the connection or significant nexus no longer exists. The remaining delineated wetlands (A, C, D, G, I, J, N and O) appear to have a clear hydrologic connection with off-Site wetlands/waters that ultimately drain to Four Mile Creek and Lake Ontario, and are therefore likely to be under federal jurisdiction pursuant to Section 404 of the Clean Water Act. However, a final jurisdictional determination must be made by USACE representatives.

6.0 REFERENCES

Cowardin, L.M., V. Carter, F.C. Goblet and E.T. LaRoae. 1979. *Classification of Wetlands and Deepwater Habitats of the United States.* U.S. Fish and Wildlife Service, OBS-79/31, Washington, D.C.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1. U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Gleason, H.A. and A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada.* D. Van Nostrand Co., New York, NY.

Hino, J. 2009. [Personal Correspondence]. Electronic mail correspondence with Brian Schwabenbauer, May 20, 2009.

Kollmorgen Corporation. 1988. *Munsell Soil Color Charts.* Macbeth Division of Kollmorgen Corporation, Baltimore, MD.

National Weather Service. 2009. *National Weather Service.* Available at: http://www.nws.noaa.gov/ (Accessed May 15, 2009).

Natural Resources Conservation Service (NRCS). 1972. *Soil Survey of Niagara County, New York.* U.S. Department of Agriculture in Cooperation with Cornell University Agricultural Experiment Station.

NRCS. 1989. *New York Soils with Potential Hydric Inclusions.* U.S. Department of Agriculture in Cooperation with National Technical Committee for Hydric Soils, Washington, D.C.

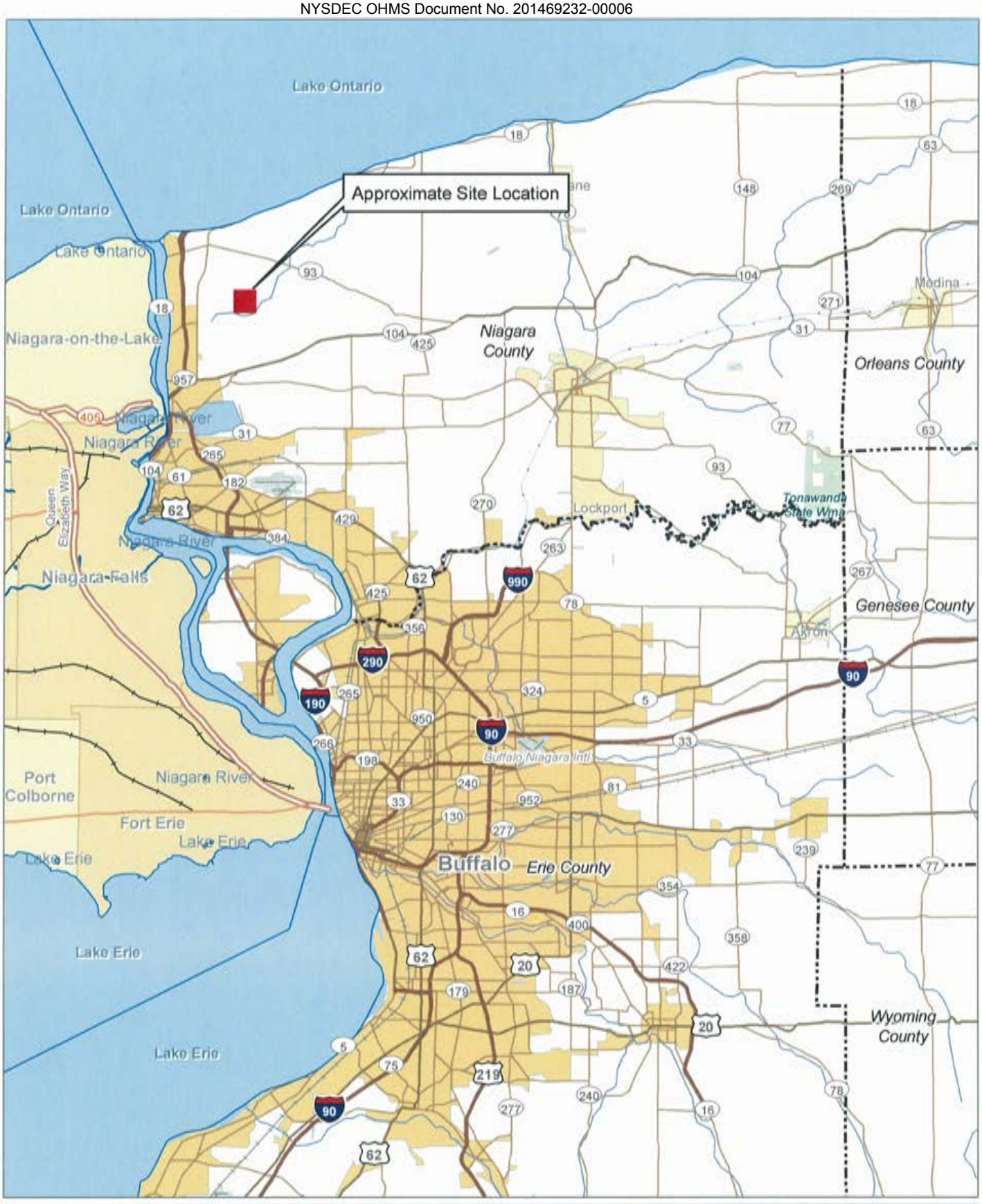
NRCS. 2008. *Hydric Soils of the State of New York.* U.S. Department of Agriculture in Cooperation with National Technical Committee for Hydric Soils, Washington, D.C.

Reed, P.B., Jr. 1988. *National List of Plant Species That Occur in Wetlands: 1998 New York.* U.S. Fish and Wildlife Service. St. Petersburg, FL.

United States Environmental Protection Agency (EPA). 2001. Interagency Memorandum from Gary S. Guzy (General Counsel for the U.S. Environmental Protection Agency) and Robert M. Anderson (Chief Counsel for the U.S. Army Corps of Engineers). Memorandum Subject: *Supreme Court Ruling Concerning CWA Jurisdiction over Isolated Waters.*

APPENDIX A

Figures



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

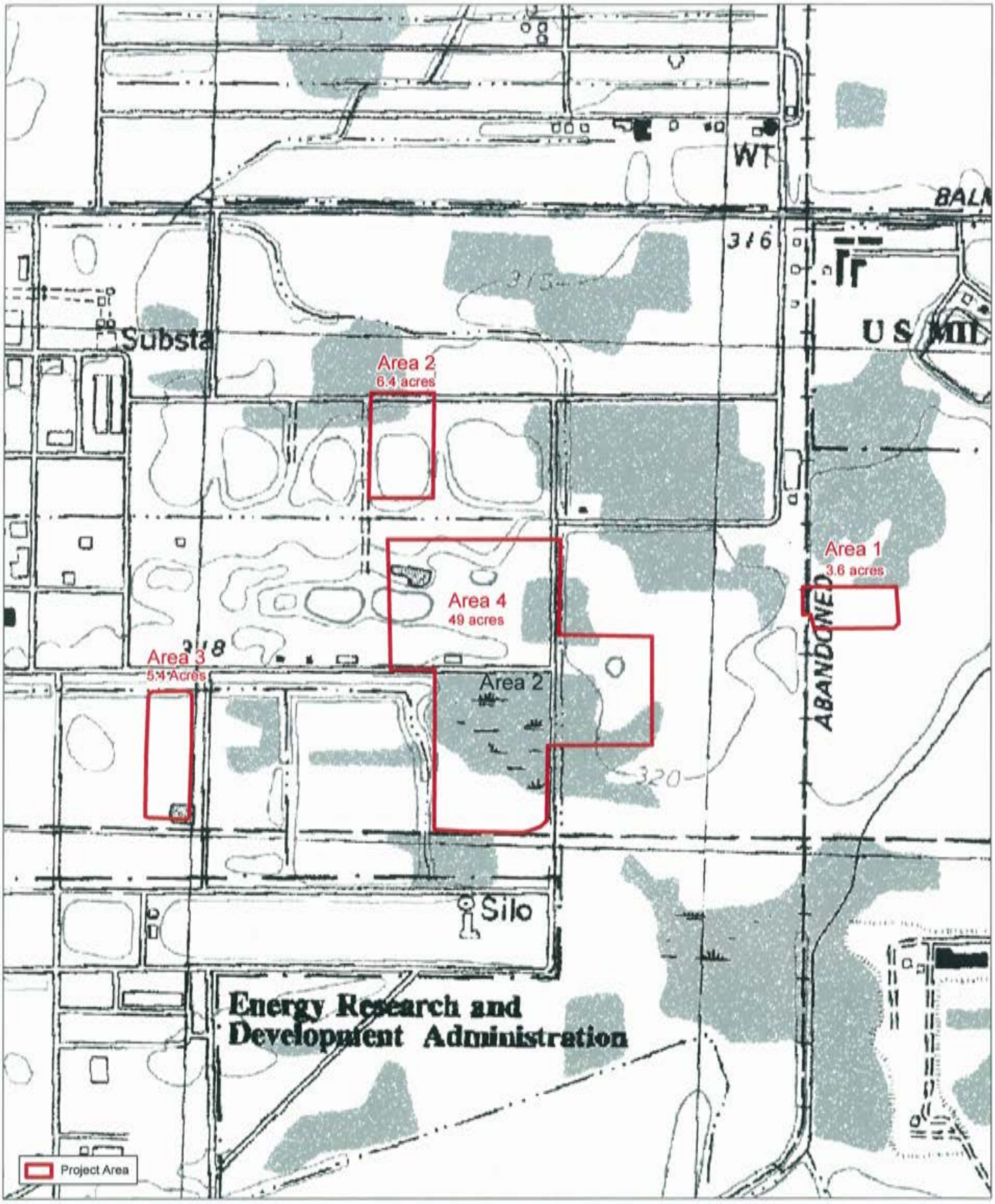
Figure 1: Regional Project Location

EDR

0 1 2 4 6 8 Miles

Notes:
Base Map: ESRI StreetMap USA, Year 2006

June 2009



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 2: Project Area

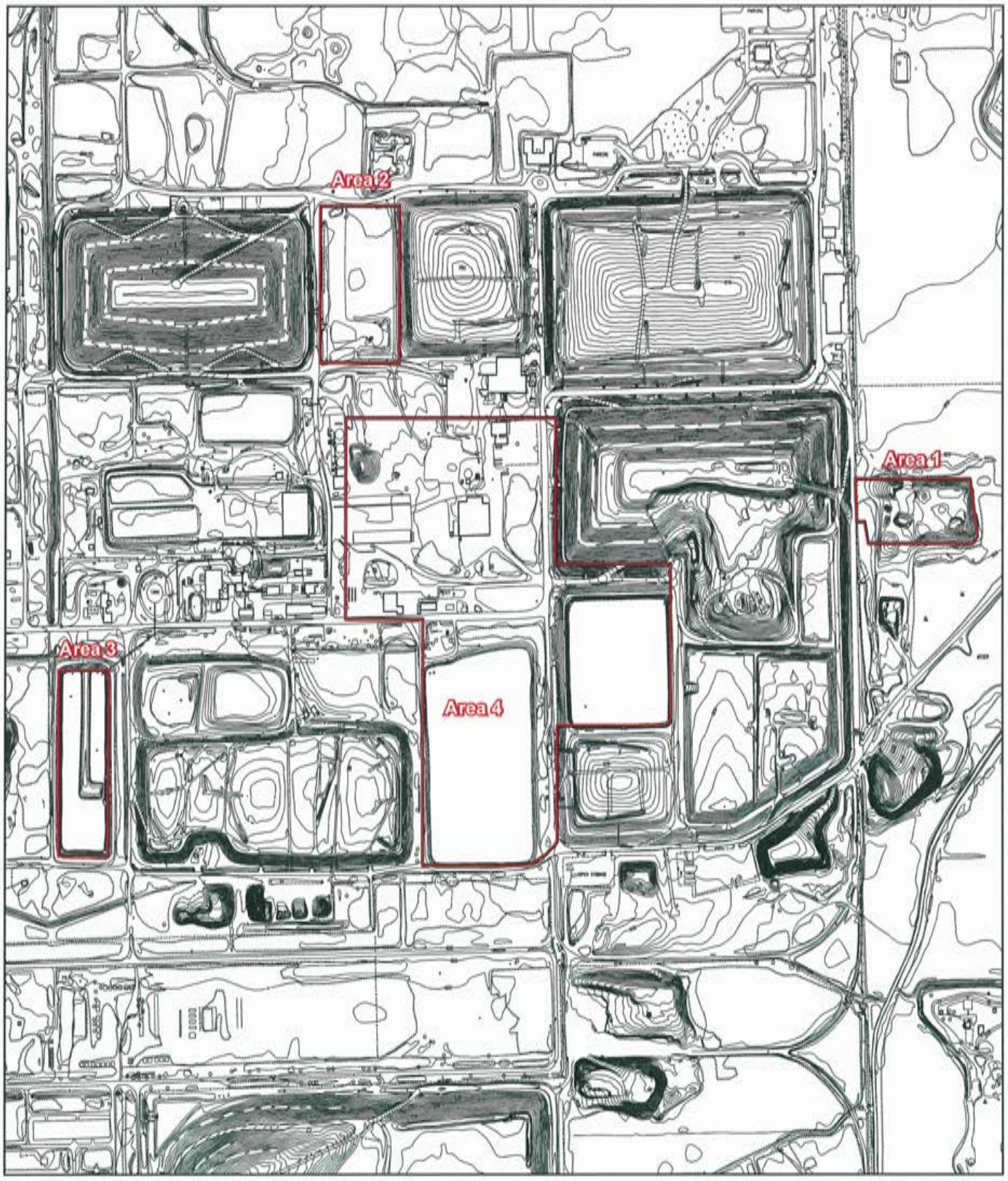
EDR

0 250 500 1,000 1,500 2,000 Feet

Notes:
Base Map: USGS 1:24000 Fort Niagara, Lewiston, Ransomville, Sixmile Creek Quadrangles.

Approximate Center Point of Site:
Latitude: -78.976265
Longitude: 43.223311

June 2009



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 3: Topographic Mapping

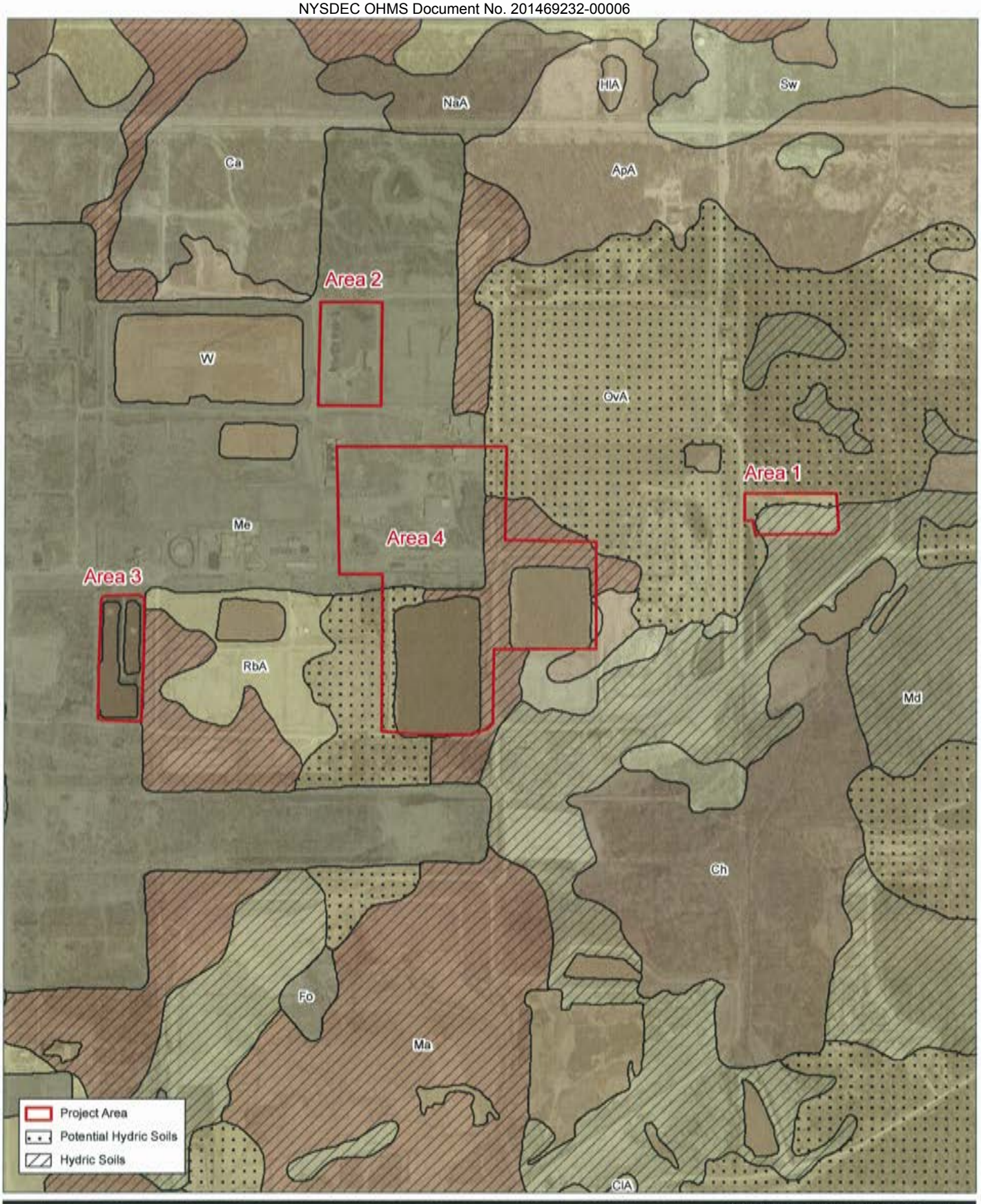
N

EDR

Project Area

Data Source: Topography obtained from Air Survey Photogrammic Mapping Services, 2001.

May 2009



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

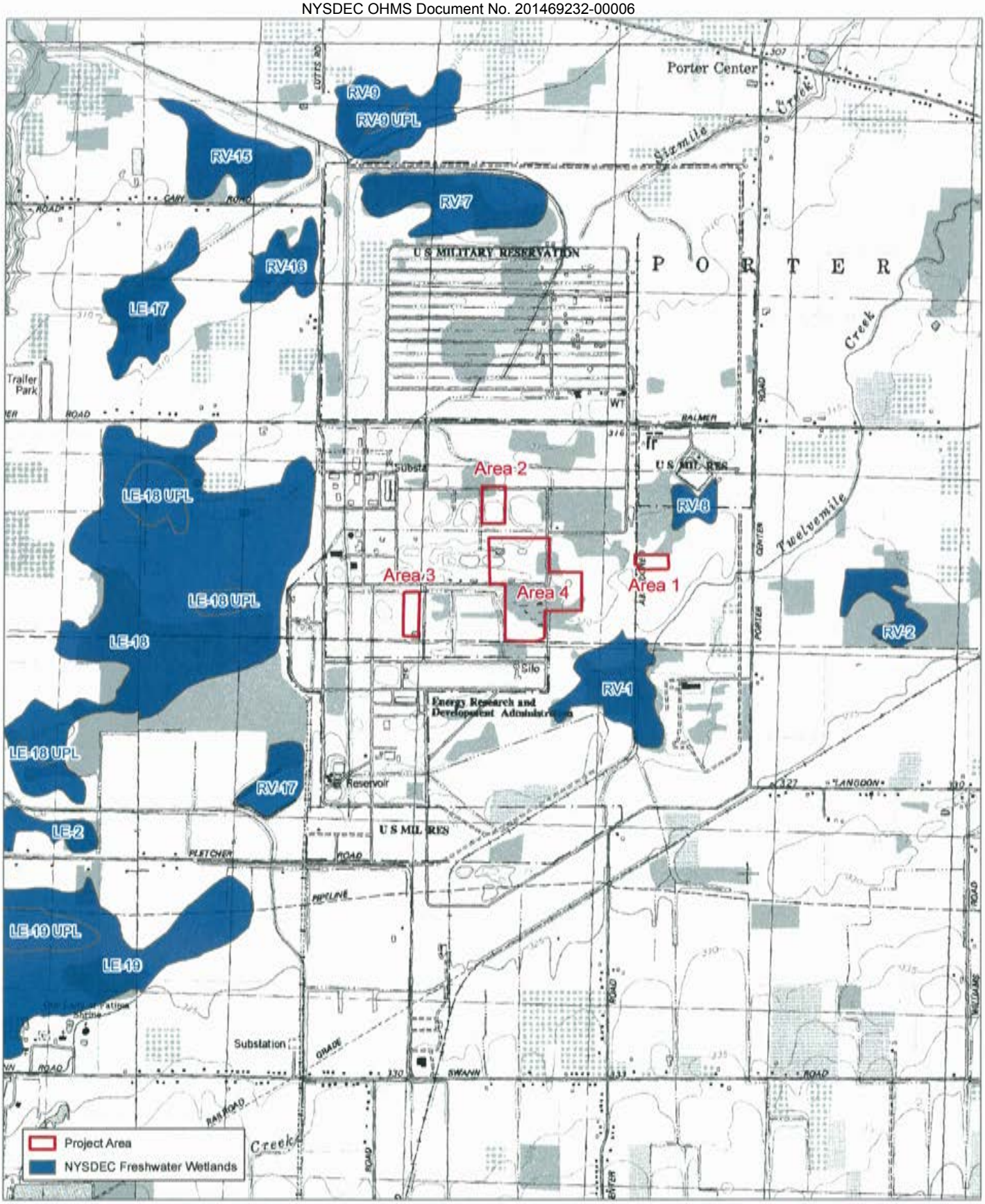
Figure 4: Site Soils

EDR

Notes:
Base Map: DOQQ Orthophotography,
Black and White, 2 ft. Resolution, Year 2005.
Data Source: USDA NRCS SSURGO Soils, 2008.

0 250 500 1,000 1,500 2,000 Feet

June 2009



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

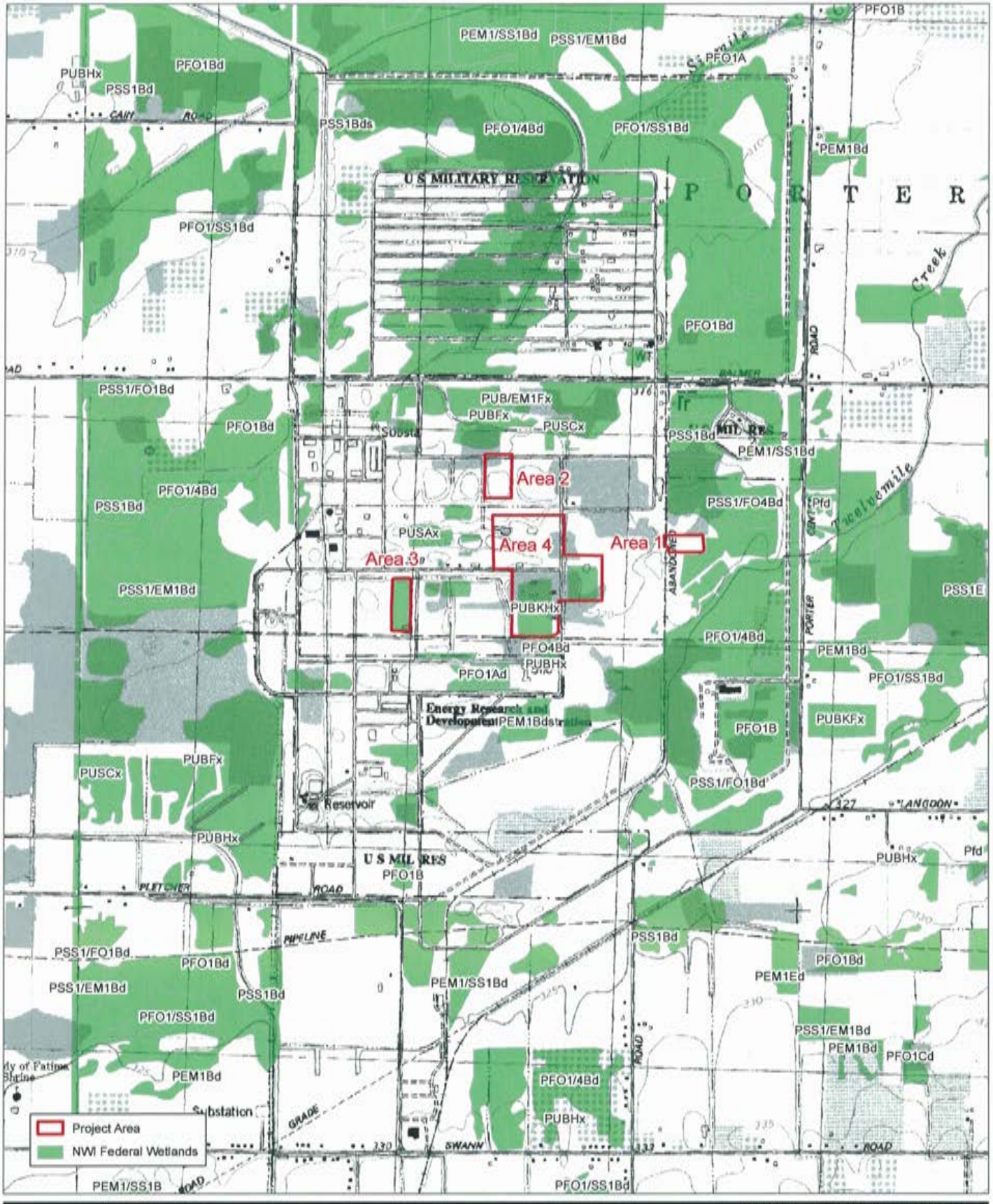
Figure 5: NYSDEC Freshwater Wetlands

EDR

0 500 1,000 2,000 3,000 4,000 Feet

Notes:
Base Map: USGS 1:24000 Fort Niagara, Lewiston, Ransomville, Sixmile Creek Quadrangles.
Data Source: NYSDEC Freshwater Wetlands Data

June 2009



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

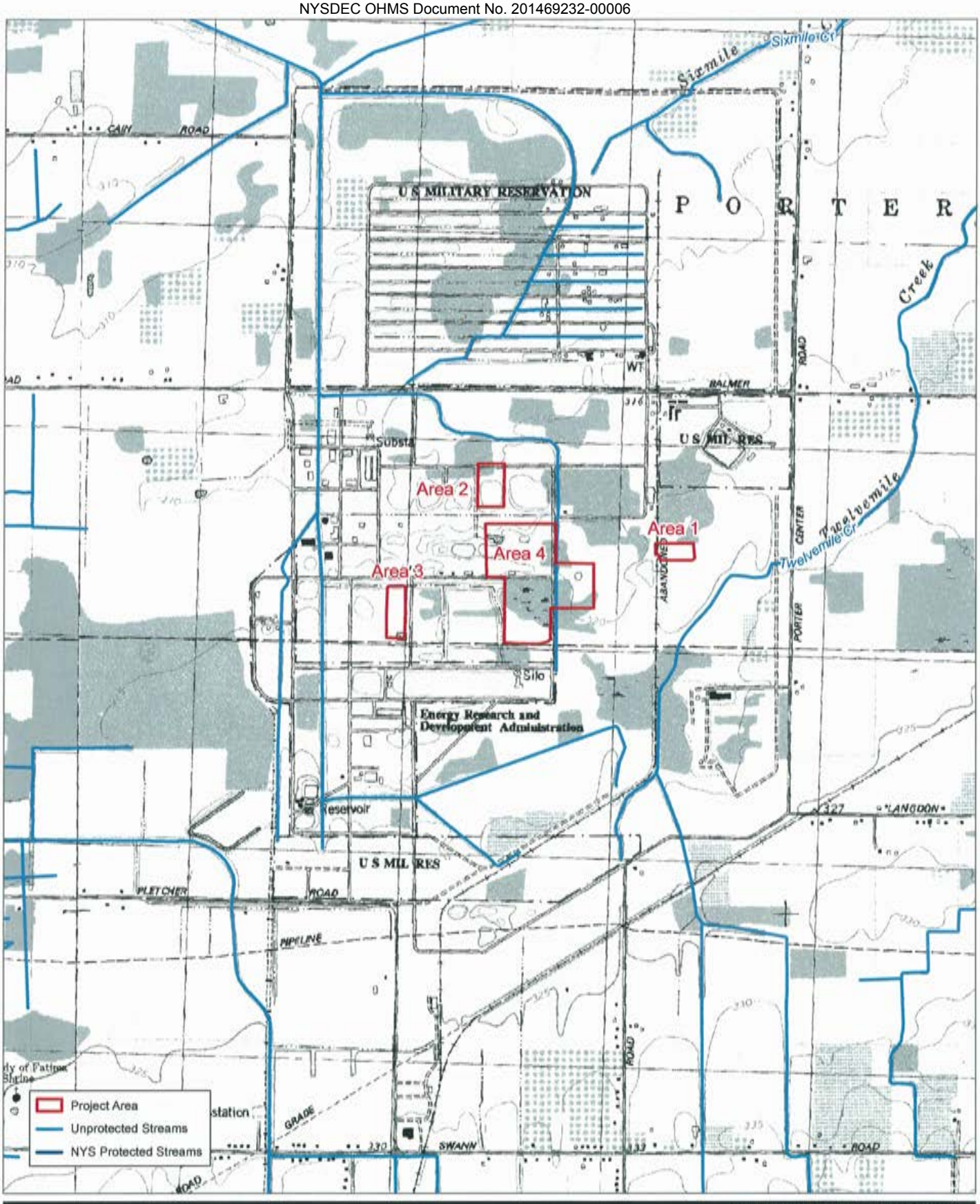
Figure 6: NWI Federal Wetlands

EDR

0 500 1,000 2,000 3,000 4,000 Feet

Notes:
Base Map: USGS 1:24000 Fort Niagara, Lewiston, Ransomville, Sixmile Creek Quadrangles.
Data Source: NWI Federal Wetland Survey

June 2009



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

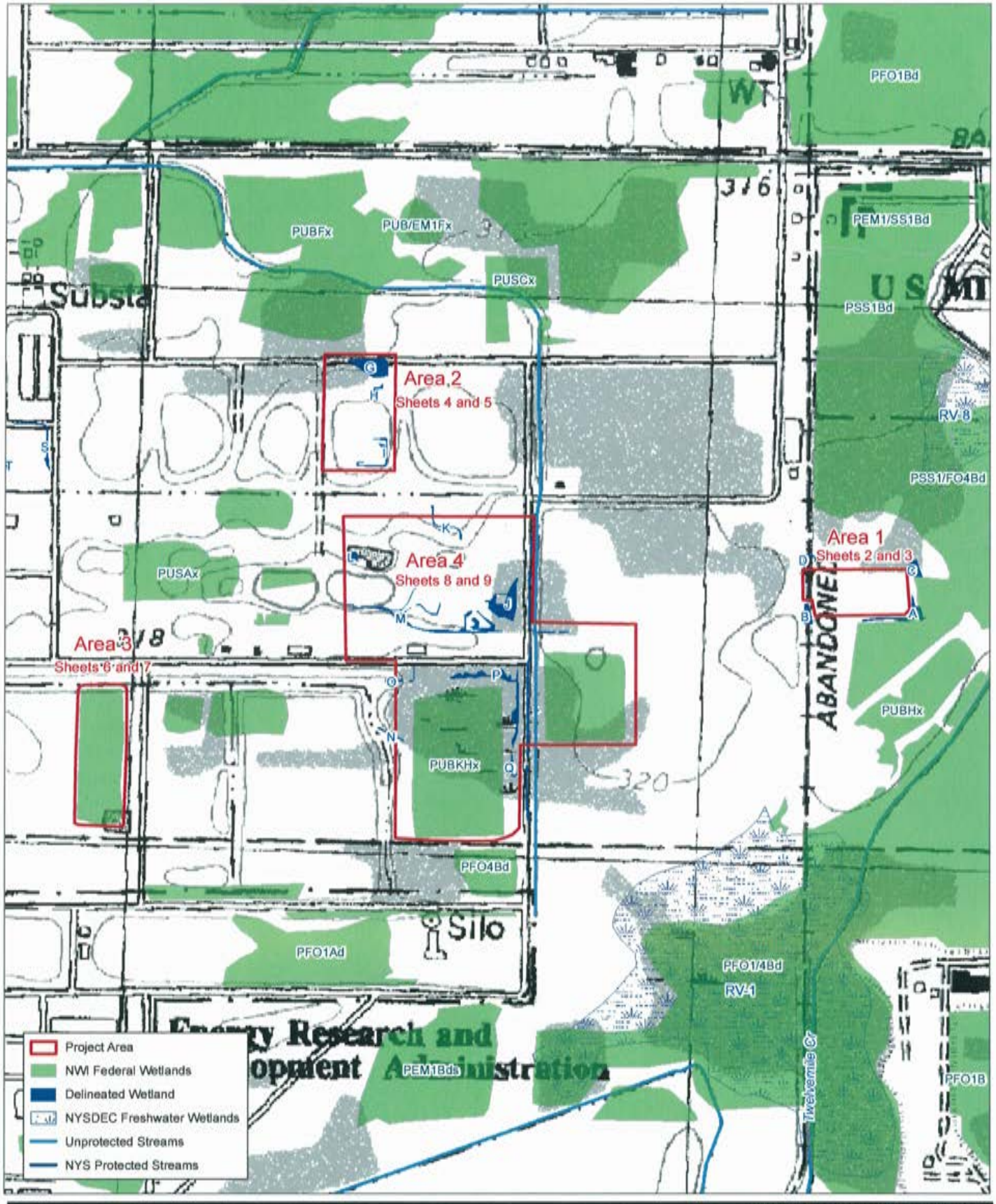
Figure 7: Surface Waters

EDR

0 500 1,000 2,000 3,000 4,000 Feet

Notes:
Base Map: USGS 1:24000 Fort Niagara, Lewiston, Ransomville, Sixmile Creek Quadrangles
Data Source: NYSDEC Stream Classification Data

June 2009



CWM Landfill Expansion

Notes:
Base Map: USGS 1:24000 Fort Niagara, Lewiston, Ransomville, Sixmile Creek Quadrangles
Data Source
1. EDR Delineated Wetlands
2. NYSDEC Stream Classification Data
3. NYSDEC Freshwater Wetland Data
4. NWI Federal Wetland Survey, Ransomville Quadrangle.

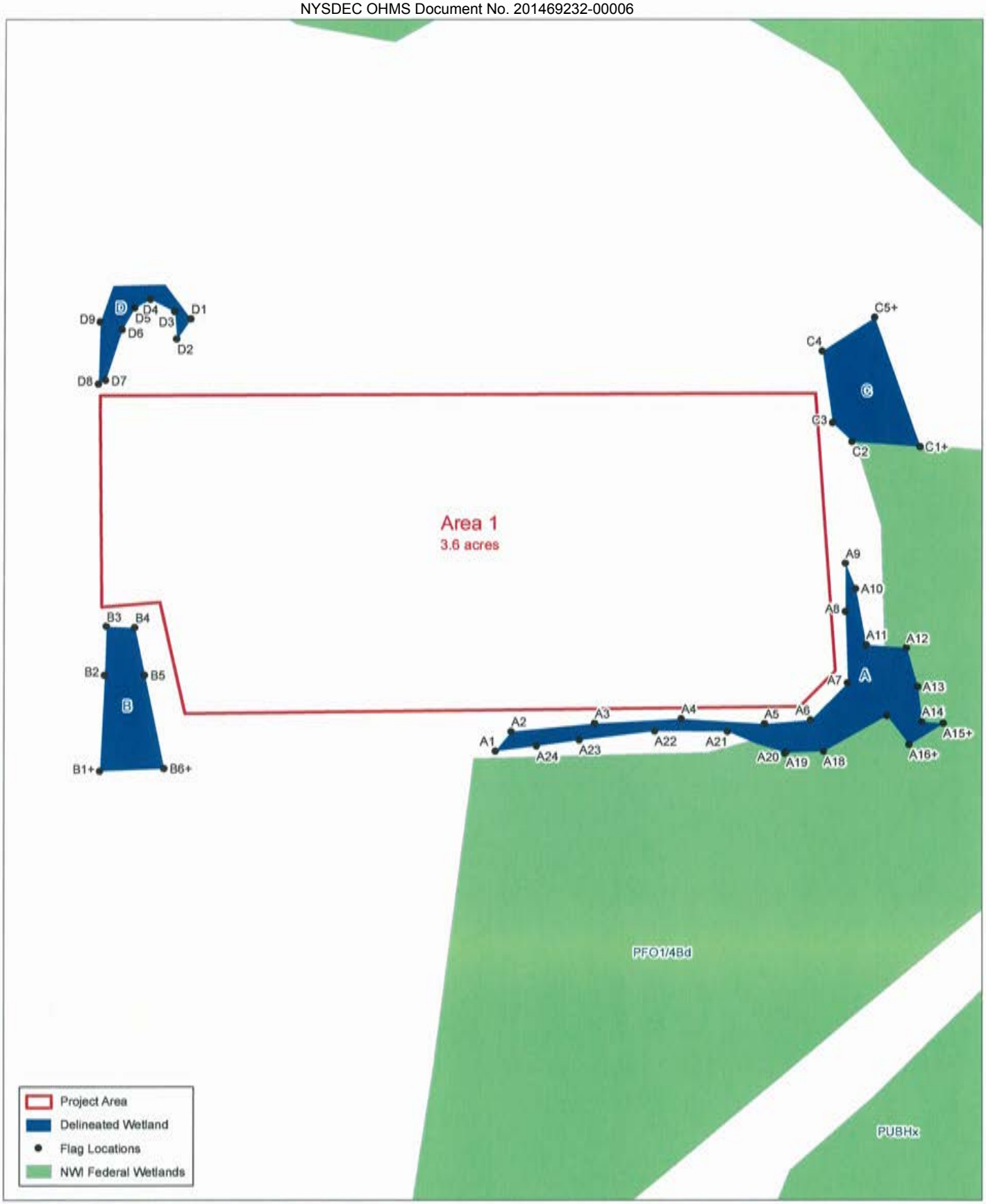
Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 8: Delineated Wetlands

Sheet 1 of 9

June 2009



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 8: Delineated Wetlands

Sheet 2 of 9

June 2009

Notes:
Data Source
1. EDR Delineated Wetlands
2. NWI Federal Wetland Survey, Ransomville Quadrangle.

CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 8: Delineated Wetlands

Sheet 3 of 9

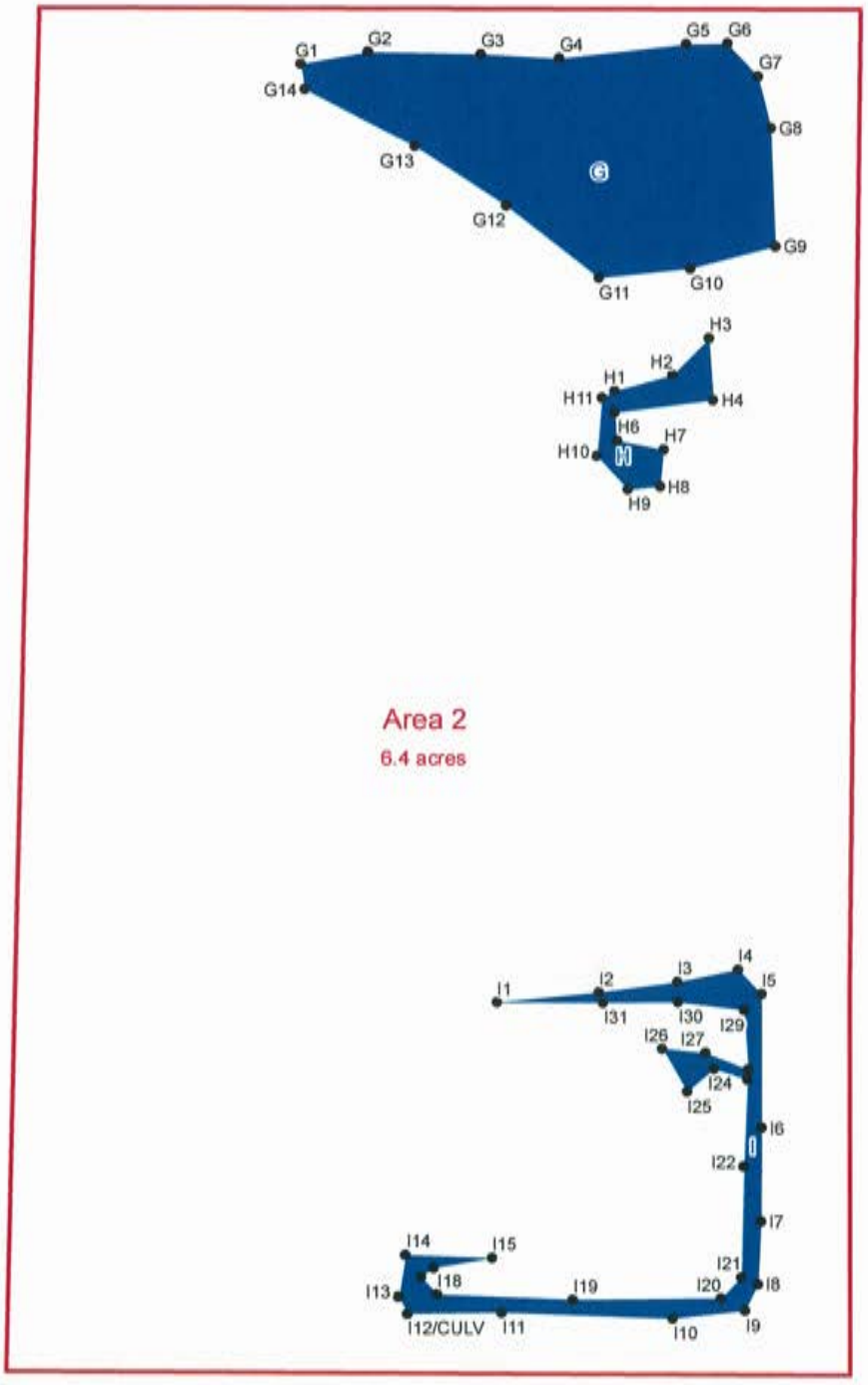
June 2009

EDR

0 25 50 100 150 200 Feet

Notes:
Data Source
Base Map: DOQQ Orthophotography, Black and White, 2 ft. resolution, Year 2005.
1. EDR Delineated Wetlands
2. NWI Federal Wetland Survey, Ransomville Quadrangle.

PFO1Bd



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 8: Delineated Wetlands

Sheet 4 of 9

June 2009

N

EDR

0 25 50 100 150 200 Feet

Notes:
Data Source
1. EDR Delineated Wetlands
2. NWI Federal Wetland Survey, Ransomville Quadrangle.

CWM Landfill Expansion

EDR

0 25 50 100 150 200 Feet

Notes:
Data Source
Base Map: DOQQ Orthophotography, Black and White, 2 ft. resolution, Year 2005.
1. EDR Delineated Wetlands
2. NWI Federal Wetland Survey, Ransomville Quadrangle.

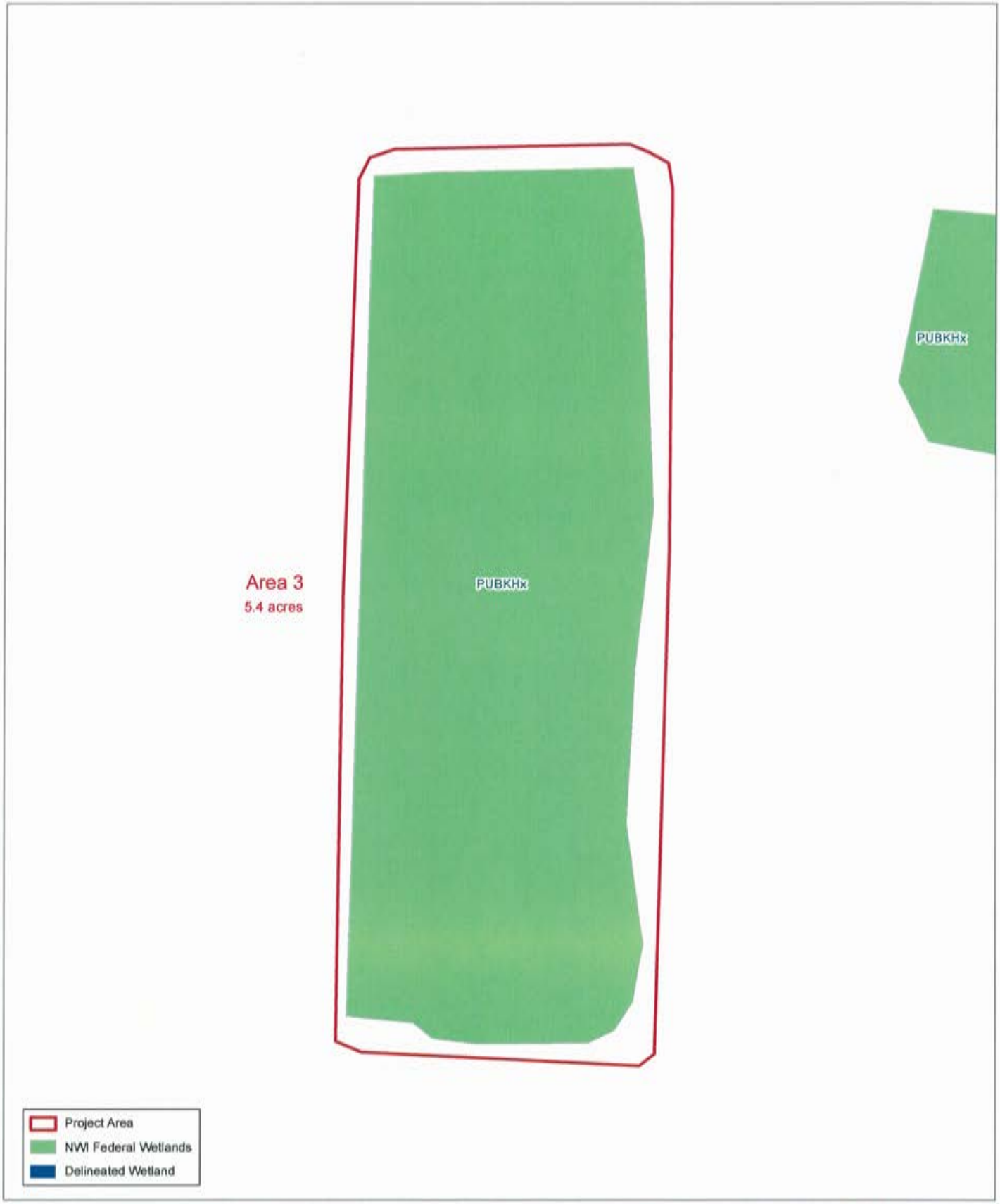
Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 8: Delineated Wetlands

Sheet 5 of 9

June 2009



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 8: Delineated Wetlands

Sheet 6 of 9

June 2009

EDR

0 25 50 100 150 200 Feet

Notes:
Data Source
1. EDR Delineated Wetlands
2. NWI Federal Wetland Survey, Ransomville Quadrangle.

CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 8: Delineated Wetlands

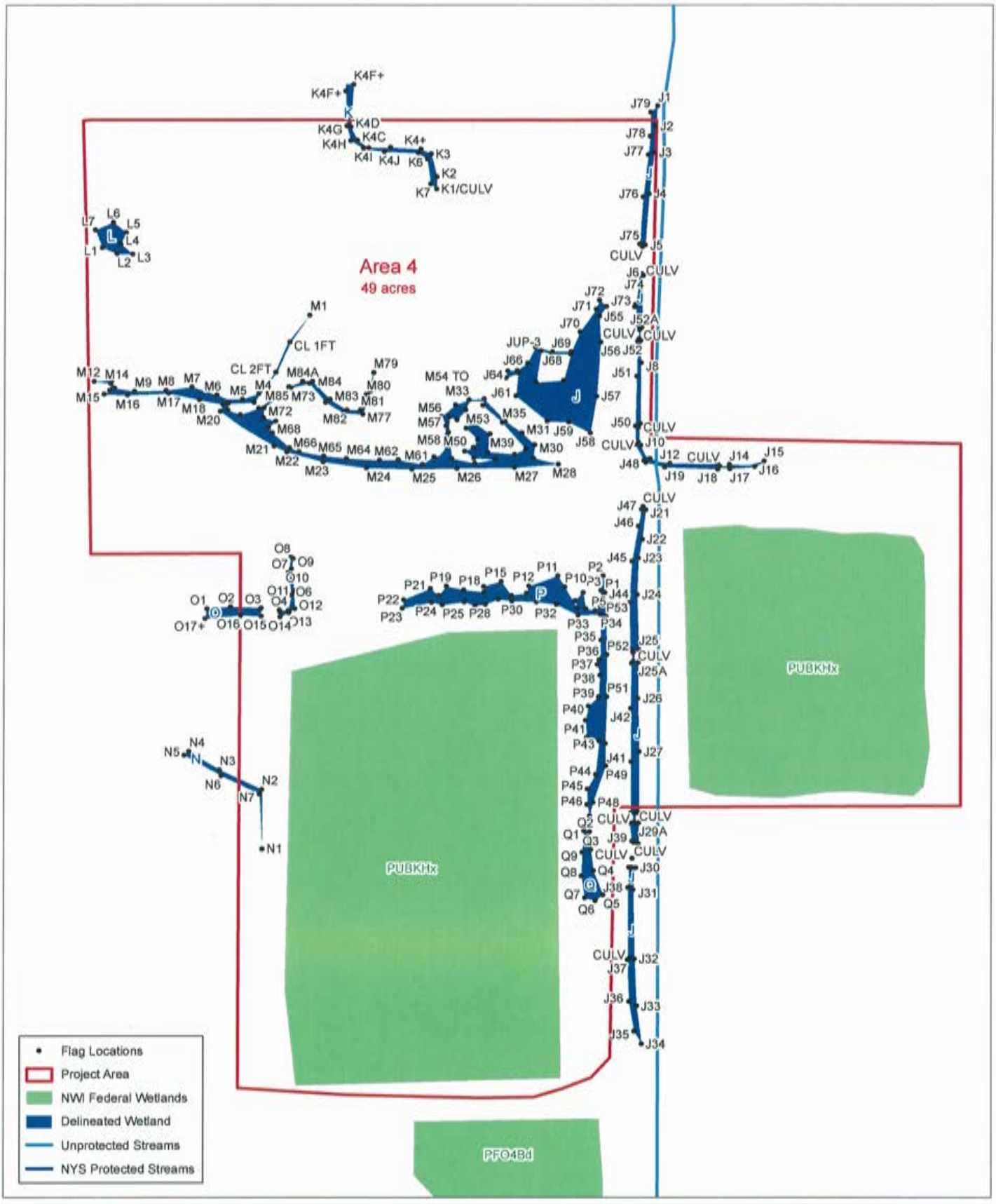
Sheet 7 of 9

June 2009

EDR

0 25 50 100 150 200 Feet

Notes:
Data Source
Base Map: DOQQ Orthophotography, Black and White, 2 ft. resolution, Year 2005.
1. EDR Delineated Wetlands
2. NWI Federal Wetland Survey, Ransomville Quadrangle.



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 8: Delineated Wetlands

Sheet 8 of 9

June 2009

EDR

0 50 100 200 300 400 Feet

Notes:
Data Source
1. EDR Delineated Wetlands
2. NWI Federal Wetland Survey, Ransomville Quadrangle.
3. NYSDEC Stream Classification Data

CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 8: Delineated Wetlands

Sheet 9 of 9

June 2009

EDR

0 50 100 200 300 400 Feet

Notes:
Data Source
Base Map: DOQQ Orthophotography, Black and White, 2 ft. resolution, Year 2005.
1. EDR Delineated Wetlands
2. NWI Federal Wetland Survey, Ransomville Quadrangle.
3. NYSDEC Stream Classification Data

APPENDIX B

Routine Wetland Determination Forms

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/22/09

Investigator: Trembath, Schwabenbauer Town: Lewiston

County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type: PEM/PSS

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: A-4

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 1 W @ Wet. A

SOILS

Series and Phase: Madalin silt loam (Md) Drainage Class: WD MWD SPD (PD) VPD

Subgroup: mesic Mollic Endoaqualfs Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-2	O	10YR 4/2	None	Organic layer
2-12	A	10YR 3/2	10YR 5/6, few 6"	Clay
12+	B	10YR 5/2	10YR 5/6, Common	Clay

Hydric Soil Indicators:

- ___ Histisols
- ___ Histic Epipedon
- ___ Sufidic Odor
- X Reducing Conditions
- X Concretions
- ___ High Org. Content in Surface Layer of Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Gleyed or Low Chroma color
- ___ Listed on Local Hydric Soils List
- ___ Listed as Potential for Hydric Inclusions Only
- ___ Other (Explain in Remarks)
- ___ Aquic Moisture Regime

Landscape position: concave X convex ___ sloping ___ Approximate slope: ___
flat ___ undulating ___

Remarks: - Adjacent to mowed upland area

HYDROLOGY

- X Recorded Data (Describe in Remarks)
- ___ No Recorded Data Available
- ___ Stream, Lake or Tide Gauge
- X Aerial Photographs

Field Observations

- ___ Ground Surface Inundated ___ inches.
- X Soil Saturated.

Depth to Free Water 2-3 inches.

Depth to Saturated Soils ___ inches.

Wetland Hydrology Indicators:

Primary Indicators

- ___ Inundated
- X Saturated in upper 12 inches.
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

- X Oxidized Root Channels in upper 12 inches
- ___ Water-Stained leaves
- ___ Local Soil Survey
- X Morphological Plant Adaptations
- ___ Other (Explain in Remarks)

Remarks: Hummocky

Project Number: 09-022	Date: 4/22/09
Applicant: CWM	Plot ID Number: 1 W @ wet. A

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	silky dogwood	H (S/S) T V	FACW.	40
2	willow shrubs	H (S/S) T V	FACW	30
3		H S/S T V		
4	Phragmites	(H) S/S T V	FACW	50
5	Equisetum sp. (field horsetail)	(H) S/S T V	FAC	40
6	sedges	(H) S/S T V	FACW/OBL	10
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100 Percent of Dominant Species OBL, FACW ~85

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No Hydric Soils Present? (Yes) or No

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

Hydrologic Connectivity to Off-site Wetlands? (Yes) or No Is this Wetland Potentially Isolated? Yes or (No)

Remarks: Photo Reference Number:

linear drainage adjacent to disturbed area reaching into forested area (mixed PFO/NDF).

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM

Date: 4/28/09
Town: Lewiston
County: Niagara
State: NY

Investigator: Trembath, Schwabenbauer

Do normal circumstances exist on site? (Yes) No
Is the site significantly disturbed? (Yes) No
Is the area a potential Problem Area? Yes (No)

Community Type: Old field/maintained lawn
Nearest Flag To Data Point: A-4
Data Point ID: (i.e. 2W@Wetland G): 1 u @ wet A

SOILS

Series and Phase: Madalin silt loam (Md) Drainage Class: WD MWD SPD (PD) VPD
Subgroup: mesic Mollic Endoaquatfs Confirm Mapped Type: (Yes) No Disturbed

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-7	A	10YR 3/3	None	Silt/Clay/Gravel
7+	B	10YR 4/3	None	Clay

Hydric Soil Indicators:

___ Histisols
___ Histic Epipedon
___ Sulfidic Odor
___ Reducing Conditions
___ Concretions
___ High Org. Content in Surface Layer of Sandy Soils
___ Organic Streaking in Sandy Soils
___ Gleyed or Low Chroma color
___ Listed on Local Hydric Soils List
___ Listed as Potential for Hydric Inclusions Only
___ Other (Explain in Remarks)
___ Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___
flat X undulating ___

Remarks: - Area regularly mowed
No hydric soil indicators noted.

HYDROLOGY

X Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
X Aerial Photographs

Field Observations
___ Ground Surface Inundated ___ inches.
___ Soil Saturated.

Depth to Free Water ___ inches.
Depth to Saturated Soils ___ inches.

Wetland Hydrology Indicators:

Primary Indicators
___ Inundated
___ Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
___ Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
___ Local Soil Survey
___ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 09-022
Applicant: CWM
Date: 4/26/09
Plot ID Number: 1 @ wet A

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	fescues	(H) S/S T V	FACU	25
2	bluegrass	(H) S/S T V	FACU	50
3	white clover	(H) S/S T V	FACU-	10
4	dandelion	(H) S/S T V	FACU-	5
5	perennial rye grass	(H) S/S T V	FACU-	10
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 0

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No)

Hydric Soils Present? Yes or (No)

Wetland Hydrology Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or (No)

Is this Wetland Potentially Isolated? Yes or (N/A)

Remarks: Photo Reference Number:

* 1 u @ wet A is a shared upland sample point with wetland B.

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/09

Town: Lewiston

Investigator: Trembath, Schwabenhauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type PEM

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: B-3

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 1W @ wet. B

SOILS

Series and Phase: Ovid silt loam Drainage Class: WD MWD (SPD) PD VPD

Subgroup: mesic Aeric Endoaqualfs Confirm Mapped Type: (Yes) No Disturbed

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-4	A	10YR 3/2	None	Silt loam
4+	B	10YR 5/2	10YR 5/6, Common	Clay

Hydric Soil Indicators:

- ___ Histisols
- ___ Histic Epipedon
- ___ Sufidic Odo.
- ___ Reducing Conditions
- X Concretions
- ___ High Org. Content in Surface Layer of Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Gleyed or Low Chroma color
- ___ Listed on Local Hydric Soils List
- ___ Listed as Potential for Hydric Inclusions Only
- ___ Other (Explain in Remarks)
- ___ Aquic Moisture Regime

Landscape position: concave X convex ___ sloping ___ Approximate slope: ___
flat ___ undulating ___

Remarks: - Adjacent to road on one side and maintained/mowed areas on 2 sides

HYDROLOGY

- X Recorded Data (Describe in Remarks)
- ___ No Recorded Data Available
- ___ Stream, Lake or Tide Gauge
- X Aerial Photographs

Field Observations

- X Ground Surface Inundated ~1 inches.
- X Soil Saturated.

Depth to Free Water 0 inches.

Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators
- ✓ Inundated
- ✓ Saturated in upper 12 inches.
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
- ✓ Oxidized Root Channels in upper 12 inches
- ___ Water-Stained leaves
- ___ Local Soil Survey
- ✓ Morphological Plant Adaptations
- ___ Other (Explain in Remarks)

Remarks: Hummocky

Project Number: 09-022
Applicant: CWM
Date: 4/28/09
Plot ID Number: 1 w @ wet-B

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	Phragmites	(H) S/S T V	FACW	80
2	Sedges	(H) S/S T V	FACW/OBL	10
3	soft rush	(H) S/S T V	FACW+	10
4		H S/S T V		
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100

Percent of Dominant Species OBL, FACW 100

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No

Hydric Soils Present? (Yes) or No

Wetland Hydrology Present? (Yes) or No

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

Hydrologic Connectivity to Off-site Wetlands? (Yes) or No

Is this Wetland Potentially Isolated? Yes (or No)

Remarks:

Photo Reference Number:

Man-made stormwater retention area. Very shallow water (<6") showing significant wet. veg. throughout. No deeper, open water component in this area.

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM

Date: 4/28/09
Town: Lewiston
County: Niagara
State: NY

Investigator: Trembath, Schwabenbauer

Do normal circumstances exist on site? (Yes) No
Is the site significantly disturbed? (Yes) No
Is the area a potential Problem Area? Yes (No)

Community Type: PEM / PSS / PFO
Nearest Flag To Data Point: C-4
Data Point ID: (i.e. 2W@Wetland G): 1W @ wet C

SOILS

Series and Phase: Ovid silt loam
Drainage Class: WD MWD (SPD) PD VPD
Subgroup: mesic Aeric Endoaquolfs
Confirm Mapped Type: (Yes) No Disturbed

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-2	O	10YR 2/2	None	organic layer
2-12	A	10YR 3/2	10YR 5/6, few 7½	Clay
12+	B	10YR 5/2	10YR 5/6, Common	Clay

Hydric Soil Indicators:

___ Histisols
___ Histic Epipedon
___ Sufidic Odor
___ Reducing Conditions
___ Concretions
___ High Org. Content in Surface Layer of Sandy Soils
___ Organic Streaking in Sandy Soils
___ Gleyed or Low Chroma color
___ Listed on Local Hydric Soils List
___ Listed as Potential for Hydric Inclusions Only
___ Other (Explain in Remarks)
___ Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___
flat ___ undulating X

Remarks: Adjacent to maintained/mowed upland area.

HYDROLOGY

X Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
X Aerial Photographs

Field Observations

___ Ground Surface Inundated ___ inches.
X Soil Saturated.
Depth to Free Water 4-5 inches.
Depth to Saturated Soils ~1 inches.

Wetland Hydrology Indicators:

Primary Indicators
___ Inundated
X Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
X Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
___ Local Soil Survey
X Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks: Hummocky

Project Number: 09-022
Applicant: CWM
Date: 4/28/09
Plot ID Number: 1W@ wet.C

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	Black willow	H S/S (T) V	FACW+	50
2	willow shrubs	H (S/S) T V	FACW	30
3	silky dogwood	H (S/S) T V	FACW	20
4		H S/S T V		
5	Phragmites	(H) S/S T V	FACW	80
6	Sedges	(H) S/S T V	FACW/OBL	10
7	Solidago sp. (likely gigantea)	(H) S/S T V	FACW	10
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100
Percent of Dominant Species OBL, FACW 100
50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No
Hydric Soils Present? (Yes) or No
Wetland Hydrology Present? (Yes) or No
Is this Sampling Point Within a Wetland? (Yes) or No
Hydrologic Connectivity to Off-site Wetlands? (Yes) or No
Is this Wetland Potentially Isolated? Yes (or) No

Remarks: Mixed EM/SS/FO wetland draining into mixed FO/SS wetland off-site.
Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

274 North Goodman Street
Rochester, New York 14607

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 09-022 Applicant: CWM

Date: 4/28/09
Town: Lewiston
County: Niagara
State: NY

Investigator: Trembath, Schwabenbauer

Do normal circumstances exist on site? (Yes) No
Is the site significantly disturbed? (Yes) No
Is the area a potential Problem Area? Yes (No)

Community Type: Maintained lawn
Nearest Flag To Data Point: C-4
Data Point ID: (i.e. 2W@Wetland G): 1 u @ wet. C

SOILS

Series and Phase: Ovid silt loam
Drainage Class: WD MWD (SPD) PD VPD
Subgroup: mesic Mollic Endoaqualfs
Confirm Mapped Type: (Yes) No Disturbed

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-12	A	10YR 3/3	None	Gravel / Silt loam mix
12+	B	10YR 4/3	NONE	Clay

Hydric Soil Indicators:

___ Histisols
___ Histic Epipedon
___ Sulfidic Odor
___ Reducing Conditions
___ Concretions
___ High Org. Content in Surface Layer of Sandy Soils
___ Organic Streaking in Sandy Soils
___ Gleyed or Low Chroma color
___ Listed on Local Hydric Soils List
___ Listed as Potential for Hydric Inclusions Only
___ Other (Explain in Remarks)
___ Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___
flat X undulating ___

Remarks: No hydric soil indicators noted.
- Area regularly mowed.

HYDROLOGY

✓ Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
✓ Aerial Photographs

Field Observations

___ Ground Surface Inundated ___ inches.
___ Soil Saturated.

Depth to Free Water ___ inches.
Depth to Saturated Soils ___ inches.

Wetland Hydrology Indicators:

Primary Indicators
___ Inundated
___ Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
___ Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
___ Local Soil Survey
___ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 09-022	Date: 4/20/09
Applicant: CWM	Plot ID Number: 1 u/c wet. C

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	bluegrass (Kentucky)	(H) S/S T V	FACU	80
2	perennial rye grass	(H) S/S T V	FACU-	10
3	Aster sp. (small white)	(H) S/S T V	FAC	5
4	Queen Anne's Lace	(H) S/S T V	FACU	5
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 5

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No)

Hydric Soils Present? Yes or (No)

Wetland Hydrology Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or (No)

Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM

Date: 4/28/09
Town: Lewiston
County: Niagara
State: NY

Investigator: Trembath, Schwabenbauer

Do normal circumstances exist on site? (Yes) No
Is the site significantly disturbed? (Yes) No
Is the area a potential Problem Area? Yes (No)

Community Type: PEM
Nearest Flag To Data Point: D-3
Data Point ID: (i.e. 2W@Wetland G): 1WD wet-D

SOILS

Series and Phase: Ovid silt loam
Drainage Class: WD MWD (SPD) PD VPD
Subgroup: mesic Aeric Endoaqualfs
Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-3	O	10YR 2/2	None	organic layer
3-11	A	10YR 3/2	10YR 5/6, Few 7"	Clay
11+	B	10YR 5/2	10YR 5/6 & 5/8, Common	Clay

Hydric Soil Indicators:

___Histisols
___Histic Epipedon
___Sufidic Odor
___Reducing Conditions
___Concretions
___High Org. Content in Surface Layer of Sandy Soils
___Organic Streaking in Sandy Soils
___Gleyed or Low Chroma color
___ Listed on Local Hydric Soils List
___ Listed as Potential for Hydric Inclusions Only
___ Other (Explain in Remarks)
___ Aquic Moisture Regime

Landscape position: concave ✓ convex ___ sloping ___ Approximate slope: ___
flat ___ undulating ___

Remarks:

HYDROLOGY

✓ Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
✓ Aerial Photographs

Field Observations

___ Ground Surface Inundated ___ inches.
✓ Soil Saturated.

Depth to Free Water ___ inches.
Depth to Saturated Soils 7-8 inches.

Wetland Hydrology Indicators:

Primary Indicators
___ Inundated
✓ Saturated in upper 12 inches.
✓ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
✓ Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
___ Local Soil Survey
___ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks:

Project Number: 09-022
Applicant: CWM
Date: 4/20/09
Plot ID Number: 1WQ wet-D

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	Phragmites	(H) S/S T V	FACW	80-90
2	horsetail (field)	(H) S/S T V	FAC	10
3	Sedges	H S/S T V	FACW/OBL	30
4		H S/S T V		
5	silky dogwood	H (S/S) T V	FACW	25
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100
Percent of Dominant Species OBL, FACW 90+
50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No
Hydric Soils Present? (Yes) or No
Wetland Hydrology Present? (Yes) or No
Is this Sampling Point Within a Wetland? (Yes) or No
Hydrologic Connectivity to Off-site Wetlands? (Yes) or No
Is this Wetland Potentially Isolated? Yes or (No)

Remarks:
Photo Reference Number:

- Wet area bound on one side by road & mowed around portions of the boundary.

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

274 North Goodman Street
Rochester, New York 14607

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 09-022 Applicant: CWM

Date: 4/28/09
Town: Lewiston
County: Niagara
State: NY

Investigator: Trembath, Schwabenbauer

Do normal circumstances exist on site? (Yes) No
Is the site significantly disturbed? (Yes) No
Is the area a potential Problem Area? Yes (No)

Community Type: Maintained lawn
Nearest Flag To Data Point: D-3
Data Point ID: (i.e. 2W@Wetland G): 1 up wet. D

SOILS

Series and Phase: Ovid silt loam
Drainage Class: WD MWD SPD PD VPD
Subgroup: mesic Mollic Endoaqualfs
Confirm Mapped Type: (Yes) No Disturbed

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-10	A	10YR 3/3	None	gravel / loam
10+	B	10YR 4/3	None	Clay / silt loam

Hydric Soil Indicators:

- ___ Histisols
- ___ Histic Epipedon
- ___ Sufidic Odor
- ___ Reducing Conditions
- ___ Concretions
- ___ High Org. Content in Surface Layer of Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Gleyed or Low Chroma color
- ___ Listed on Local Hydric Soils List
- ___ Listed as Potential for Hydric Inclusions Only
- ___ Other (Explain in Remarks)
- ___ Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___
flat ___ undulating X

Remarks:
- Area regularly mowed
- No hydric soil indicators noted.

HYDROLOGY

- ✓ Recorded Data (Describe in Remarks)
- ___ No Recorded Data Available
- ___ Stream, Lake or Tide Gauge
- ✓ Aerial Photographs

Field Observations
- ___ Ground Surface Inundated ___ inches.
- ___ Soil Saturated.

Depth to Free Water ___ inches.
Depth to Saturated Soils ___ inches.

Wetland Hydrology Indicators:

Primary Indicators
- ___ Inundated
- ___ Saturated in upper 12 inches.
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
- ___ Oxidized Root Channels in upper 12 inches
- ___ Water-Stained leaves
- ___ Local Soil Survey
- ___ Morphological Plant Adaptations
- ___ Other (Explain in Remarks)

Remarks:
No wetland hydrology noted.

Project Number: 09-022	Date: 4/28/09
Applicant: CWM	Plot ID Number: 1 u @ wet. D

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	dandelion	(H) S/S T V	FACU-	10
2	perennial rye grass	(H) S/S T V	FACU-	35
3	dandelion	(H) S/S T V	FACU-	20
4	teasel	(H) S/S T V	NL	5
5	Queen Anne's Lace	(H) S/S T V	FACU	5
6	bluegrass	(H) S/S T V	FACU	25
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 0

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No)

Hydric Soils Present? Yes or (No)

Wetland Hydrology Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or (No)

Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type: PEM

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: G-3

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 1W @ Wet. G

SOILS

Series and Phase: Made land (ma) Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-2	O	10YR 2/2	None	Organic layer
2-10	A	10YR 3/2	10YR 5/6, Few	Silty loam
10+	B	10YR 5/2	10YR 5/6, Common	Clay

Hydric Soil Indicators:

___Histisols ___Concretions ___ Listed on Local Hydric Soils List
___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___ Listed as Potential for Hydric Inclusions Only
___Sufidic Odor ___Organic Streaking in Sandy Soils ___ Other (Explain in Remarks)
___Reducing Conditions ___Gleyed or Low Chroma color ___ Aquic Moisture Regime

Landscape position: concave X convex ___ sloping ___ Approximate slope: ___
flat ___ undulating ___

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
X Aerial Photographs

Field Observations

✓ Ground Surface Inundated 1-2 inches.
✓ Soil Saturated.

Depth to Free Water 0 inches.
Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators
✓ Inundated
✓ Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
✓ Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
✓ Local Soil Survey
✓ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks:
Hummocky

Project Number: 09-022
Applicant: CWM
Date: 4/28/09
Plot ID Number: 1 W @ wet. G

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	Phragmites	(H) S/S T V	FACW	80
2		H S/S T V		
3	silky dogwood (<24")	(H) S/S T V	FACW	50
4		H S/S T V		
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100

Percent of Dominant Species OBL, FACW 100

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No

Hydric Soils Present? (Yes) or No

Wetland Hydrology Present? (Yes) or No

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

Hydrologic Connectivity to Off-site Wetlands? (Yes) or No ?

Is this Wetland Potentially Isolated? Yes or (No) ?

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM

Date: 4/28/09
Town: Lewiston
County: Niagara
State: NY

Investigator: Trembath, Schwabenbauer

Do normal circumstances exist on site? (Yes) No
Is the site significantly disturbed? (Yes) No
Is the area a potential Problem Area? Yes (No)

Community Type: Old field / lawn
Nearest Flag To Data Point: G-3
Data Point ID: (i.e. 2W@Wetland G): 1u @ wet. G

SOILS

Series and Phase: Made land
Drainage Class: WD MWD SPD PD VPD
Subgroup:
Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-14	A	10YR 3/3	None	Clay/Silt loam
14+	B	10YR 5/2	None	Clay

Hydric Soil Indicators:

___Histisols
___Histic Epipedon
___Sufidic Odor
___Reducing Conditions
___Concretions
___High Org. Content in Surface Layer of Sandy Soils
___Organic Streaking in Sandy Soils
___Gleyed or Low Chroma color
___ Listed on Local Hydric Soils List
___ Listed as Potential for Hydric Inclusions Only
___ Other (Explain in Remarks)
___ Aquic Moisture Regime

Landscape position: concave ____ convex ____ sloping ____ Approximate slope: ____
flat ____ undulating X

Remarks: No hydric soil indicators noted.

HYDROLOGY

✓ Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
✓ Aerial Photographs

Field Observations

___ Ground Surface Inundated ____ inches.
___ Soil Saturated.

Depth to Free Water ____ inches.
Depth to Saturated Soils ____ inches.

Wetland Hydrology Indicators:

Primary Indicators
___ Inundated
___ Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
___ Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
___ Local Soil Survey
___ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 09-022
Applicant: CWM
Date: 4/28/09
Plot ID Number: 1u @ wet. G

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	fescues	(H) S/S T V	FACU	75
2	perennial rye grass	(H) S/S T V	FACU-	20
3	old field cinquefoil	(H) S/S T V	FACU-	5
4		H S/S T V		
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 0

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No)

Hydric Soils Present? Yes or (No)

Wetland Hydrology Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or No (N/A)

Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks: Photo Reference Number:

* 1u @ wetland G and 1u @ wetland H is a shared upland sample point.

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No

Is the site significantly disturbed? (Yes) No

Is the area a potential Problem Area? Yes (No)

Community Type PEM

Nearest Flag To Data Point: H-4

Data Point ID: (i.e. 2W@Wetland G) 1 W @ wet. H

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-6	A	10YR 3/2	10YR 5/6, Few 7.5"	Clay
6+	B	10YR 5/2	10 YR 5/6, Common	Clay

Hydric Soil Indicators:

___ Histisols
___ Histic Epipedon
___ Sulfidic Odor
___ Reducing Conditions
___ Concretions
___ High Org. Content in Surface Layer of Sandy Soils
___ Organic Streaking in Sandy Soils
___ Gleyed or Low Chroma color
___ Listed on Local Hydric Soils List
___ Listed as Potential for Hydric Inclusions Only
___ Other (Explain in Remarks)
___ Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___
flat ___ undulating X

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
X Aerial Photographs

Field Observations

___ Ground Surface Inundated ___ inches.
X Soil Saturated.

Depth to Free Water 1-2 inches.

Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators
BT X Inundated
X Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
___ Oxidized Root Channels in upper 12 inches
X Water-Stained leaves
___ Local Soil Survey
X Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks: Hummocky. Pockets of standing water 1-2" deep.

Project Number: 09-022
Applicant: CWM
Date: 4/28/09
Plot ID Number: 1 W @ wet. H

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	Phragmites	(H) S/S T V	FACW	90
2	Sedges	(H) S/S T V	FACW	10
3		H S/S T V		
4		H S/S T V		
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100

Percent of Dominant Species OBL, FACW 100

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No

Hydric Soils Present? (Yes) or No

Wetland Hydrology Present? (Yes) or No

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

Hydrologic Connectivity to Off-site Wetlands? Yes or (No)

Is this Wetland Potentially Isolated? (Yes) or No

Remarks:

Photo Reference Number:

* 1 u @ wetland H and 1u @ wetland G is a shared upland sample point.

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No. 09-022 Applicant: CWM Date: 4/28/09

Investigator: Trembath, Schwabenbauer Town: Lewiston

County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type: PEM

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: I-6

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 1W@ wet. I

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-5	A	10YR 3/2	None	Clay
5+	B	10YR 5/2	10YR 5/6, Common	Clay

Hydric Soil Indicators:

___ Histisols
___ Histic Epipedon
___ Sulfidic Odor
___ Reducing Conditions
X Concretions
___ High Org. Content in Surface Layer of Sandy Soils
___ Organic Streaking in Sandy Soils
___ Gleyed or Low Chroma color
___ Listed on Local Hydric Soils List
___ Listed as Potential for Hydric Inclusions Only
___ Other (Explain in Remarks)
___ Aquic Moisture Regime

Landscape position: concave X convex ___ sloping ___ Approximate slope: ___
flat ___ undulating ___

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
X Aerial Photographs

Field Observations
X Ground Surface Inundated N/A inches.
X Soil Saturated.

Depth to Free Water 0 inches.

Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators
X Inundated
X Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
X Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
X Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
___ Local Soil Survey
___ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks:

Project Number: 09-022	Date: 4/28/09
Applicant: CWM	Plot ID Number: 1 W @ wet. I

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	Phragmites	(H) S/S T V	FACW	80
2	sedges	(H) S/S T V	FACW/OBL	10
3	Equisetum (field horsetail)	(H) S/S T V	FAC	10
4		H S/S T V		
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100 Percent of Dominant Species OBL, FACW 90

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No Hydric Soils Present? (Yes) or No

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

Hydrologic Connectivity to Off-site Wetlands? (Yes) or No ? Is this Wetland Potentially Isolated? Yes or (No) ?

Remarks: Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type: maintained lawn

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: I-6

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) lu @ wet. I

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-16+	A	10YR 3/3	None	Clay

Hydric Soil Indicators:

- ___ Histisols
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Reducing Conditions
- ___ Concretions
- ___ High Org. Content in Surface Layer of Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Gleyed or Low Chroma color
- ___ Listed on Local Hydric Soils List
- ___ Listed as Potential for Hydric Inclusions Only
- ___ Other (Explain in Remarks)
- ___ Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___
flat ___ undulating X

Remarks: - Area regularly mowed and in an area of significant disturbance (ie. soil roll-off storage area)
- No hydric soil indicators noted.

HYDROLOGY

- ✓ Recorded Data (Describe in Remarks)
- ___ No Recorded Data Available
- ___ Stream, Lake or Tide Gauge
- ✓ Aerial Photographs

Field Observations

- ___ Ground Surface Inundated ___ inches.
- ___ Soil Saturated.

Depth to Free Water ___ inches.

Depth to Saturated Soils ___ inches.

Wetland Hydrology Indicators:

Primary Indicators

- ___ Inundated
- ___ Saturated in upper 12 inches.
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

- ___ Oxidized Root Channels in upper 12 inches
- ___ Water-Stained leaves
- ___ Local Soil Survey
- ___ Morphological Plant Adaptations
- ___ Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 09-022
Applicant: CWM
Date: 4/28/09
Plot ID Number: 1 H @ wet. I

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	fescues	(H) S/S T V	FACU	60
2	orchard grass	(H) S/S T V	FACU	10
3	Queen Anne's Lace	(H) S/S T V	FACU	<5
4	dandelion	(H) S/S T V	FACU-	15
5	White clover	(H) S/S T V	FACU-	25
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 0

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No)

Hydric Soils Present? Yes or (No)

Wetland Hydrology Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or No (N/A)

Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/07

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type: PEM

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: J-76

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 1 W @ wet, J

SOILS

Series and Phase: Madalin silt loam Drainage Class: WD MWD SPD (PD) VPD

Subgroup: mesic Mollic Endoaquepts Confirm Mapped Type: (Yes) No Disturbed

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-6	A	10YR 3/2	10YR 5/6, Few 25%	Clay
6+	B	10YR 5/2	10YR 5/6, Common	Clay

Hydric Soil Indicators:

___ Histisols ✓ Concretions ___ Listed on Local Hydric Soils List

___ Histic Epipedon ___ High Org. Content in Surface Layer of Sandy Soils ___ Listed as Potential for Hydric Inclusions Only

___ Sufidic Odor ___ Organic Streaking in Sandy Soils ___ Other (Explain in Remarks)

___ Reducing Conditions ___ Gleyed or Low Chroma color ___ Aquic Moisture Regime

Landscape position: concave X convex ___ sloping ___ Approximate slope: ___

flat ___ undulating ___

Remarks: Roadside drainage to series of culverts at back of landfill.

HYDROLOGY

✓ Recorded Data (Describe in Remarks)

___ No Recorded Data Available

___ Stream, Lake or Tide Gauge

✓ Aerial Photographs

Field Observations

✓ Ground Surface Inundated 2-3 inches.

✓ Soil Saturated.

Depth to Free Water 0 inches.

Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators

✓ Inundated

✓ Saturated in upper 12 inches.

___ Water Marks

___ Drift Lines

✓ Sediment Deposits

___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

✓ Oxidized Root Channels in upper 12 inches

✓ Water-Stained leaves

___ Local Soil Survey

___ Morphological Plant Adaptations

___ Other (Explain in Remarks)

Remarks:

Project Number: 09-022
Applicant: CWM
Date: 4/28/09
Plot ID Number: 1 w @ wet. J

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	thin leaf cattail	(H) S/S T V	OBL	50
2	Common cattail	(H) S/S T V	OBL	40
3	soft rush	(H) S/S T V	FACW+	10
4		H S/S T V		
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100

Percent of Dominant Species OBL, FACW 100

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No

Hydric Soils Present? (Yes) or No

Wetland Hydrology Present? (Yes) or No

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

Hydrologic Connectivity to Off-site Wetlands? (Yes) or No ?

Is this Wetland Potentially Isolated? (Yes) or No ?

Remarks: A large portion of wetland J consists of a series of drainage ditches located between base of landfill & access roads, all interconnected by numerous culverts.

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type: maintained roadside

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: J-79

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G): 1w @ wet. J

SOILS

Series and Phase: Madalin silt loam Drainage Class: WD MWD SPD (PD) VPD

Subgroup: mesic Mollic Endoaqualfs Confirm Mapped Type: Yes No Disturbed

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-14	A	10YR 3/3, 4/4	None	Silt & gravel
14+	B	10YR 4/3	None	Silt loam

Hydric Soil Indicators:

___Histisols ___Concretions ___ Listed on Local Hydric Soils List
___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___ Listed as Potential for Hydric Inclusions Only
___Sufidic Odor ___Organic Streaking in Sandy Soils ___ Other (Explain in Remarks)
___Reducing Conditions ___Gleyed or Low Chroma color ___ Aquic Moisture Regime

Landscape position: concave ____ convex ____ sloping X Approximate slope: 15-20°
flat ____ undulating ____

Remarks: No hydric soil indicators noted.
* Shared upland sample point for 1w & 2w @ wet. J

HYDROLOGY

✓ Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
✓ Aerial Photographs

Field Observations

___ Ground Surface Inundated ____ inches.
___ Soil Saturated.

Depth to Free Water ____ inches.

Depth to Saturated Soils ____ inches.

Wetland Hydrology Indicators:

Primary Indicators
___ Inundated
___ Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
___ Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
___ Local Soil Survey
___ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 09-022	Date: 4/28/09
Applicant: CWM	Plot ID Number: 1u @ wet-J

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	fescues	(H) S/S T V	FACU	30
2	dandelion	(H) S/S T V	FACU-	15
3	perennial rye grass	(H) S/S T V	FACU-	35
4	common vetch	(H) S/S T V	FACU-	10
5	tease l	(H) S/S T V	NL	10
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 0

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No)

Hydric Soils Present? Yes or (No)

Wetland Hydrology Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or (No)

Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type PFO/PEM

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: J-56

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 2 W @ wet. J

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-4	A	10YR 3/2	None	Silt loam
4+	B	10YR 5/2	10YR 5/6 ; 5/8, Common	Clay

Hydric Soil Indicators:

___Histisols ___Concretions ___ Listed on Local Hydric Soils List

___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___ Listed as Potential for Hydric Inclusions Only

___Sufidic Odor ___Organic Streaking in Sandy Soils ___ Other (Explain in Remarks)

___Reducing Conditions ___Gleyed or Low Chroma color ___ Aquic Moisture Regime

Landscape position: concave ____ convex ____ sloping ____ Approximate slope: ____
flat ____ undulating ____

Remarks: - Area adjacent to mowed areas & roads

HYDROLOGY

✓ Recorded Data (Describe in Remarks)

___ No Recorded Data Available

___ Stream, Lake or Tide Gauge

✓ Aerial Photographs

Field Observations

___ Ground Surface Inundated ____ inches.

✓ Soil Saturated.

Depth to Free Water 2-3 inches.

Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators

___ Inundated

✓ Saturated in upper 12 inches.

✓ Water Marks

___ Drift Lines

___ Sediment Deposits

___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

✓ Oxidized Root Channels in upper 12 inches

✓ Water-Stained leaves

___ Local Soil Survey

✓ Morphological Plant Adaptations

___ Other (Explain in Remarks)

Remarks: Buttressing

Project Number: 09-022
Applicant: CWM
Date: 4/28/09
Plot ID Number: 2w@wet.J

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	red maple	H S/S (T) V	FAC	40
2	green ash	H S/S (T) V	FACW	40
3		H S/S T V		
4	sedges	(H) S/S T V	FACW/OBL	75
5	soft rush	(H) S/S T V	FACW+	10
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100
Percent of Dominant Species OBL, FACW ~80
50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No
Hydric Soils Present? (Yes) or No
Wetland Hydrology Present? (Yes) or No
Is this Sampling Point Within a Wetland? (Yes) or No
Hydrologic Connectivity to Off-site Wetlands? (Yes) or No BS
Is this Wetland Potentially Isolated? BS (Yes) or No

Remarks:
Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
~~ROUTINE WETLAND DETERMINATION~~
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type: maintained lawn

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: J-56

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 2 u @ wet. J

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-14	A	10YR 3/3	None	gravel/silt loam
14+	B	10YR 5/2	None	Clay

Hydric Soil Indicators:

___Histisols ___Concretions ___ Listed on Local Hydric Soils List

___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___ Listed as Potential for Hydric Inclusions Only

___Sufidic Odor ___Organic Streaking in Sandy Soils ___ Other (Explain in Remarks)

___Reducing Conditions ___Gleyed or Low Chroma color ___ Aquic Moisture Regime

Landscape position: concave ____ convex ____ sloping X Approximate slope: 3-5°

flat ____ undulating ____

Remarks: Narrow area between site road & roadside ditch

- No hydric soil indicators noted.

HYDROLOGY

✓ Recorded Data (Describe in Remarks)

___ No Recorded Data Available

✓ Stream, Lake or Tide Gauge

___ Aerial Photographs

Field Observations

___ Ground Surface Inundated ____ inches.

___ Soil Saturated.

Depth to Free Water ____ inches.

Depth to Saturated Soils ____ inches.

Wetland Hydrology Indicators:

Primary Indicators

___ Inundated
___ Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

___ Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
___ Local Soil Survey
___ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks:

No wetland hydrology noted.

Project Number: 09-022	Date: 4/28/09
Applicant: CWM	Plot ID Number: 2u @ wet. J

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	fescues	(H) S/S T V	FACU	80
2	perennial rye grass	(H) S/S T V	FACU-	15
3	field horsetail	(H) S/S T V	FAC	<5
4	tease l	(H) S/S T V	NL	<5
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC <5 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No) Hydric Soils Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or No (N/A) Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks: Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type PEM is drainage channel

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: K-2

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 1W@ wet K

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-2	O	10YR 3/2	None	organic layer
2-12	A	10YR 3/2	10YR 5/6, Mod. Abund.	clay
12+	B	10YR 5/2	10YR 5/6, Common	clay

Hydric Soil Indicators:

- ___ Histisols
- ___ Histic Epipedon
- ___ Sufidic Odor
- ___ Reducing Conditions
- ✓ Concretions
- ___ High Org. Content in Surface Layer of Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Gleyed or Low Chroma color
- ___ Listed on Local Hydric Soils List
- ___ Listed as Potential for Hydric Inclusions Only
- ___ Other (Explain in Remarks)
- ___ Aquic Moisture Regime

Landscape position: concave ✓ convex ___ sloping ___ Approximate slope: ___
flat ___ undulating ___

Remarks:

HYDROLOGY

- ✓ Recorded Data (Describe in Remarks)
- ___ No Recorded Data Available
- ___ Stream, Lake or Tide Gauge
- ✓ Aerial Photographs

Field Observations

- ✓ Ground Surface Inundated ~1 inches.
- ✓ Soil Saturated.

Depth to Free Water 0 inches.

Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators
- ✓ Inundated
- ✓ Saturated in upper 12 inches.
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
- ___ Oxidized Root Channels in upper 12 inches
- ✓ Water-Stained leaves
- ___ Local Soil Survey
- ✓ Morphological Plant Adaptations
- ___ Other (Explain in Remarks)

Remarks:

Project Number: 09-022
Applicant: CWM
Date: 4/28/09
Plot ID Number: 1 w @ wet. K

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	Silky dogwood	H (S/S) T V	FACW	15
2		H S/S T V		
3	Phragmites	(H) S/S T V	FACW	90
4	Sedges	(H) S/S T V	FACW/OBL	10
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100
Percent of Dominant Species OBL, FACW 100
50/20 Rule Applied? Yes No

Remarks: - Area subjected to mowing on regular basis around perimeter of wet. area. and bordered on one side by parking area.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No
Hydric Soils Present? (Yes) or No
Wetland Hydrology Present? (Yes) or No
Is this Sampling Point Within a Wetland? (Yes) or No
Hydrologic Connectivity to Off-site Wetlands? Yes or (No)
Is this Wetland Potentially Isolated? (Yes) or No

Remarks:
Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type: maintained lawn

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: K-2

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 1 u @ wet. K

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-7	A	10YR 3/3	NONE	SILT LOAM
7+	B	10YR 4/3	NONE	SILT/CLAY

Hydric Soil Indicators:

___Histisols ___Concretions ___ Listed on Local Hydric Soils List

___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___ Listed as Potential for Hydric Inclusions Only

___Sufidic Odor ___Organic Streaking in Sandy Soils ___ Other (Explain in Remarks)

___Reducing Conditions ___Gleyed or Low Chroma color ___ Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___
flat ___ undulating X

Remarks: No hydric soil indicators noted.

HYDROLOGY

X Recorded Data (Describe in Remarks)

___ No Recorded Data Available

___ Stream, Lake or Tide Gauge

X Aerial Photographs

Field Observations

___ Ground Surface Inundated ___ inches.

___ Soil Saturated.

Depth to Free Water ___ inches.

Depth to Saturated Soils ___ inches.

Wetland Hydrology Indicators:

Primary Indicators

___ Inundated
___ Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

___ Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
___ Local Soil Survey
___ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 09-022	Date: 4/28/09
Applicant: CWM	Plot ID Number: 14 @ wet. K

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	fescues	(H) S/S T V	FACU	70
2	perennial rye grass	(H) S/S T V	FACU-	10
3	white clover	(H) S/S T V	FACU-	10
4	dandelion	(H) S/S T V	FACU-	10
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks: - Area mowed regularly

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No) Hydric Soils Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or (No) Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks: Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type PEM

Is the site significantly disturbed? # (Yes) No Nearest Flag To Data Point: L-1

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 1 w @ wet. L

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-9	A	10YR 3/2	10YR 5/4, Common >6"	Clay
9+	B	10YR 5/2	10YR 5/4, Common	Clay

Hydric Soil Indicators:

- ___ Histisols
- ___ Histic Epipedon
- ___ Sufidic Odor
- ___ Reducing Conditions
- ___ Concretions
- ___ High Org. Content in Surface Layer of Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Gleyed or Low Chroma color
- ___ Listed on Local Hydric Soils List
- ___ Listed as Potential for Hydric Inclusions Only
- ___ Other (Explain in Remarks)
- ___ Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___
flat ✓ undulating ___

Remarks: # Area rutted, mowed to edges and in an area of significant industrial activity / disturbance.

HYDROLOGY

- ✓ Recorded Data (Describe in Remarks)
- ___ No Recorded Data Available
- ___ Stream, Lake or Tide Gauge
- ✓ Aerial Photographs

Field Observations

- ✓ Ground Surface Inundated ~1 inches.
- ✓ Soil Saturated.

Depth to Free Water 0 inches.

Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators
- ✓ Inundated
- ✓ Saturated in upper 12 inches.
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
- ✓ Oxidized Root Channels in upper 12 inches
- ___ Water-Stained leaves
- ___ Local Soil Survey
- ✓ Morphological Plant Adaptations
- ___ Other (Explain in Remarks)

Remarks: Hummocky

Project Number: 09-022	Date: 4/28/09
Applicant: CWM	Plot ID Number: 1 W @ wet. L

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	Phragmites	(H) S/S T V	FACW	70
2	sedges	(H) S/S T V	FACW/OBL	20
3	silky dogwood	H (S/S) T V	FACW	10
4		H S/S T V		
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC_____ Percent of Dominant Species OBL, FACW_____

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No

Hydric Soils Present? (Yes) or No

Wetland Hydrology Present? (Yes) or No

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

Hydrologic Connectivity to Off-site Wetlands? Yes or (No)

Is this Wetland Potentially Isolated? (Yes) or No

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

274 North Goodman Street
Rochester, New York 14607

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 09-022 Applicant: CWM Date: 4/28/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type: maintained lawn

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: 1 W @ wet. L

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) BT 1 L-1

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-12	A	10YR 3/3	None	Silt / Clay loam
12+	B	10YR 4/3	None	Silt / Clay loam

Hydric Soil Indicators:

___Histisols ___Concretions ___ Listed on Local Hydric Soils List

___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___ Listed as Potential for Hydric Inclusions Only

___Sufidic Odor ___Organic Streaking in Sandy Soils ___ Other (Explain in Remarks)

___Reducing Conditions ___Gleyed or Low Chroma color ___ Aquic Moisture Regime

Landscape position: concave ____ convex ____ sloping ____ Approximate slope: ____

flat ____ undulating X

Remarks: - Area regularly mowed & heavily rutted by machinery

* No hydric soil indicators noted.

HYDROLOGY

✓ Recorded Data (Describe in Remarks)

___ No Recorded Data Available

___ Stream, Lake or Tide Gauge

✓ Aerial Photographs

Field Observations

___ Ground Surface Inundated ___ inches.

___ Soil Saturated.

Depth to Free Water ___ inches.

Depth to Saturated Soils ___ inches.

Wetland Hydrology Indicators:

Primary Indicators

___ Inundated
___ Saturated in upper 12 inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

___ Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
___ Local Soil Survey
___ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 09-022	Date: 4/28/09
Applicant: CWM	Plot ID Number: 1 u @ wet. L

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	fescues	(H) S/S T V	FACU	90
2	dandelion	(H) S/S T V	FACU-	5
3	orchard grass	(H) S/S T V	FACU	<5
4	timothy	(H) S/S T V	FACU	<5
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 90

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No)

Hydric Soils Present? Yes or (No)

Wetland Hydrology Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or No (N/A)

Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

274 North Goodman Street
Rochester, New York 14607

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 09-022 Applicant: CWM

Date: 4/28/09
Town: Lewiston
County: Niagara
State: NY

Investigator: Trembath, Schwabenbauer

Do normal circumstances exist on site? (Yes) No
Is the site significantly disturbed? Yes (No)
Is the area a potential Problem Area? Yes (No)

Community Type: PFO/PSS
Nearest Flag To Data Point: M-21
Data Point ID: (i.e. 2W@Wetland G): 1W @ wet. M

SOILS

Series and Phase: Made land
Drainage Class: WD MWD SPD PD VPD
Subgroup:
Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-8	A	10YR 3/2	10YR 5/6, Mod. Abund. >6"	Clay
8+	B	10YR 5/2	10YR 5/6 ; 5/8, Common	Clay

Hydric Soil Indicators:

___ Histisols
___ Histic Epipedon
___ Sulfidic Odor
___ Reducing Conditions
___ Concretions
___ High Org. Content in Surface Layer of Sandy Soils
___ Organic Streaking in Sandy Soils
___ Gleyed or Low Chroma color
___ Listed on Local Hydric Soils List
___ Listed as Potential for Hydric Inclusions Only
___ Other (Explain in Remarks)
___ Aquic Moisture Regime

Landscape position: concave X convex ___ sloping ___ Approximate slope: ___
flat ___ undulating ___

Remarks:

HYDROLOGY

X Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
X Aerial Photographs

Field Observations
X Ground Surface Inundated 1-2 inches.
X Soil Saturated.
Depth to Free Water 0 inches.
Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators
✓ Inundated
✓ Saturated in upper 12 inches.
✓ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
___ Oxidized Root Channels in upper 12 inches
✓ Water-Stained leaves
___ Local Soil Survey
✓ Morphological Plant Adaptations *
___ Other (Explain in Remarks)

Remarks: Area inundated with pockets of standing water in excess of 12" deep. * Buttressing

Project Number: 09-022	Date: 4/28/09
Applicant: CWM	Plot ID Number: 1 W @ wet. M

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	green ash	H S/S (T) V	FACW	50
2	red maple	H S/S (T) V	FAC	25
3		H S/S T V		
4	green ash	H (S/S) T V	FACW	20
5	willow shrubs	H (S/S) T V	FACW	35
6		H S/S T V		
7	common cattail	(H) S/S T V	OBL	50
8	Phragmites	(H) S/S T V	FACW	30
9	wool grass	(H) S/S T V	FACW+	10
10	sedges	(H) S/S T V	FACW/OBL	10
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100 Percent of Dominant Species OBL, FACW ~90

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No

Hydric Soils Present? (Yes) or No

Wetland Hydrology Present? (Yes) or No

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

Hydrologic Connectivity to Off-site Wetlands? BS (Yes) or No

Is this Wetland Potentially Isolated? BS Yes or (No)

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

274 North Goodman Street
Rochester, New York 14607

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 09-022 Applicant: CWM

Date: 4/28/09
Town: Lewiston
County: Niagara
State: NY

Investigator: Trembath, Schwabenbauer

Do normal circumstances exist on site? (Yes) No
Is the site significantly disturbed? (Yes) No
Is the area a potential Problem Area? Yes (No)

Community Type: maintained road edge
Nearest Flag To Data Point: M-21
Data Point ID: (i.e. 2W@Wetland G): 1 u @ wet. M

SOILS

Series and Phase: Made land
Drainage Class: WD MWD SPD PD VPD
Subgroup:
Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-16+	A	10YR 5/4	None	Gravel

Hydric Soil Indicators:

- ___ Histisols
- ___ Histic Epipedon
- ___ Sufidic Odor
- ___ Reducing Conditions
- ___ Concretions
- ___ High Org. Content in Surface Layer of Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Gleyed or Low Chroma color
- ___ Listed on Local Hydric Soils List
- ___ Listed as Potential for Hydric Inclusions Only
- ___ Other (Explain in Remarks)
- ___ Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping X Approximate slope: 10-15°
flat ___ undulating ___

Remarks: - Area regularly maintained & impacted by mowing, snow removal, etc. * No hydric soil indicators noted.

HYDROLOGY

- ✓ Recorded Data (Describe in Remarks)
- ___ No Recorded Data Available
- ___ Stream, Lake or Tide Gauge
- ✓ Aerial Photographs

Field Observations
- ___ Ground Surface Inundated ___ inches.
- ___ Soil Saturated.

Depth to Free Water ___ inches.
Depth to Saturated Soils ___ inches.

Wetland Hydrology Indicators:

Primary Indicators
- ___ Inundated
- ___ Saturated in upper 12 inches.
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
- ___ Oxidized Root Channels in upper 12 inches
- ___ Water-Stained leaves
- ___ Local Soil Survey
- ___ Morphological Plant Adaptations
- ___ Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 09-022	Date: 4/28/09
Applicant: CWM	Plot ID Number: 1 u @ wet. M

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	fescues	(H) S/S T V	FACU	70
2	orchard grass	(H) S/S T V	FACU	20
3	dandelion	(H) S/S T V	FACU-	5
4	old field cinquefoil	(H) S/S T V	FACU-	5
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 0 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No) Hydric Soils Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or No (N/A) Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks: Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/09

Investigator: Trembath, Schwabenbauer Town: Lewiston

County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type PEM/PSS

Is the site significantly disturbed? Yes (No) Nearest Flag To Data Point: M-91

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 2 W @ wet. M

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-13	A	10YR 3/2	10YR 5/6, Few > 7"	Clay
13+	B	10YR 5/2	10YR 5/6, Common	Clay

Hydric Soil Indicators:

___Histisols ___Concretions ___Listed on Local Hydric Soils List

___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___Listed as Potential for Hydric Inclusions Only

___Sufidic Odor ___Organic Streaking in Sandy Soils ___Other (Explain in Remarks)

___Reducing Conditions ___Gleyed or Low Chroma color ___Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___

flat ___ undulating X

Remarks:

HYDROLOGY

✓ Recorded Data (Describe in Remarks)

___ No Recorded Data Available

___ Stream, Lake or Tide Gauge

✓ Aerial Photographs

Field Observations

✓ Ground Surface Inundated 1-2 inches.

✓ Soil Saturated.

Depth to Free Water: 0 inches.

Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators

✓ Inundated

✓ Saturated in upper 12 inches.

✓ Water Marks

___ Drift Lines

___ Sediment Deposits

✓ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

✓ Oxidized Root Channels in upper 12 inches

✓ Water-Stained leaves

___ Local Soil Survey

✓ Morphological Plant Adaptations * Hummocky

___ Other (Explain in Remarks)

Remarks:

- linear drainage channel; silty substrate; gentle gradient flow
Avg width = 2-3 ft; Avg. depth = 1-2 inches

Project Number: 09-022
Applicant: CWM
Date: 4/28/09
Plot ID Number: 2w (@ wet. m

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	Sedges	(H) S/S T V	FACW/OBL	70
2	Soft rush	(H) S/S T V	FACW+	20
3	wool grass	(H) S/S T V	FACW+	~10
4	Phragmites	(H) S/S T V	FACW	<5
5	silky dogwood (<24")	H (S/S) T V	FACW	10
6	honeysuckle (<24")	H (S/S) T V	FAC/FACW	10
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100

Percent of Dominant Species OBL, FACW 100

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No

Hydric Soils Present? (Yes) or No

Wetland Hydrology Present? (Yes) or No

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

Hydrologic Connectivity to Off-site Wetlands? (Yes) or No

Is this Wetland Potentially Isolated? Yes or (No)

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/28/09

Investigator: Trembath, Schwabenbauer Town: Lewiston

County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type: NDF/SS

Is the site significantly disturbed? Yes (No) Nearest Flag To Data Point: m-91

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 2 u @ wet. m

SOILS

Series and Phase: made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-9	A	10YR 3/3	None	Fine Silt loam
9+	B	10YR 4/4	None	Clay/FSL

Hydric Soil Indicators:

___Histisols ___Concretions ___ Listed on Local Hydric Soils List

___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___ Listed as Potential for Hydric Inclusions Only

___Sufidic Odor ___Organic Streaking in Sandy Soils ___ Other (Explain in Remarks)

___Reducing Conditions ___Gleyed or Low Chroma color ___ Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___

flat ___ undulating X

Remarks: No hydric soil indicators noted.

HYDROLOGY

✓ Recorded Data (Describe in Remarks)

___ No Recorded Data Available

___ Stream, Lake or Tide Gauge

✓ Aerial Photographs

Field Observations

___ Ground Surface Inundated ___ inches.

___ Soil Saturated.

Depth to Free Water ___ inches.

Depth to Saturated Soils ___ inches.

Wetland Hydrology Indicators:

Primary Indicators

___ Inundated

___ Saturated in upper 12 inches.

___ Water Marks

___ Drift Lines

___ Sediment Deposits

___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

___ Oxidized Root Channels in upper 12 inches

___ Water-Stained leaves

___ Local Soil Survey

___ Morphological Plant Adaptations

___ Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 09-022
Applicant: CWM
Date: 4/28/09
Plot ID Number: 2u @ wet. M

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	Sugar maple	H S/S (T) V	FACU-	25
2	black cherry	H S/S (T) V	FACU	10
3	buckthorn	H S/S (T) V	NL	20
4		H S/S T V		
5	multi flora rose	H (S/S) T V	FACU	40
6	raspberry (black)	H (S/S) T V	NL	40
7	honeysuckle	H (S/S) T V	FAC/FACU	10
8		H S/S T V		
9	orchard grass	(H) S/S T V	FACU	30
10	dandelion	(H) S/S T V	FACU-	30
11	white clover	(H) S/S T V	FACU-	20
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 0

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No)

Hydric Soils Present? Yes or (No)

Wetland Hydrology Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or No (N/A)

Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

274 North Goodman Street
Rochester, New York 14607

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

Project No: 09-022 Applicant: CWM Date: 4/29/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type PEM w ditch

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: N-5

Is the area a potential Problem Area? Yes No Data Point ID: (i.e. 2W@Wetland G) 1W @ wet. N

SOILS

Series and Phase: Ovid silt loam Drainage Class: WD MWD (SPD) PD VPD

Subgroup: mesic Mollic Endoaqualfs Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-2 0	10YR 2/2 →		None	Organic layer
2+12	A	10YR 3/2	10YR 5/6, Few > 6"	Clay
12+	B	10YR 5/2	10YR 5/6, Common	Clay

Hydric Soil Indicators:

___Histisols ___Concretions ___ Listed on Local Hydric Soils List
___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___ Listed as Potential for Hydric Inclusions Only
___Sufidic Odor ___Organic Streaking in Sandy Soils ___ Other (Explain in Remarks)
___Reducing Conditions ___Gleyed or Low Chroma color ___ Aquic Moisture Regime

Landscape position: concave X convex ___ sloping ___ Approximate slope: ___
flat ___ undulating ___

Remarks: - Area mowed regularly

HYDROLOGY

X Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
X Aerial Photographs

Field Observations

___ Ground Surface Inundated ___ inches.
X Soil Saturated.

Depth to Free Water 0 inches.

Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators
___ Inundated
X Saturated in upper 12 inches.
X Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
X Oxidized Root Channels in upper 12 inches
X Water-Stained leaves
___ Local Soil Survey
X Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks: Hummocky

Project Number: 09-022	Date: 4/29/09
Applicant: CWM	Plot ID Number: 1 W @ wet. N

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	Phragmites	(H) S/S T V	FACW	95
2	sedges	(H) S/S T V	FACW/OBL	5
3		H S/S T V		
4		H S/S T V		
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100

Percent of Dominant Species OBL, FACW 100

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No

Hydric Soils Present? (Yes) or No

Wetland Hydrology Present? (Yes) or No BT

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

Hydrologic Connectivity to Off-site Wetlands? (Yes) or No

Is this Wetland Potentially Isolated? Yes or (No)

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/29/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No

Is the site significantly disturbed? (Yes) No

Is the area a potential Problem Area? Yes (No)

Community Type: maintained lawn

Nearest Flag To Data Point: N-5

Data Point ID: (i.e. 2W@Wetland G) 1 u @ wet. N

SOILS

Series and Phase: Ovid silt loam Drainage Class: WD MWD (SPD) PD VPD

Subgroup: mesic Mollic Endoaqualfs Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-10	A	10YR 3/3	NONE	Silt/Gravel loam
10+	B	10YR 4/4	None	Silt/Clay loam

Hydric Soil Indicators:

___Histisols ___Concretions ___Listed on Local Hydric Soils List

___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___Listed as Potential for Hydric Inclusions Only

___Sufidic Odor ___Organic Streaking in Sandy Soils ___Other (Explain in Remarks)

___Reducing Conditions ___Gleyed or Low Chroma color ___Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___

flat ___ undulating X

Remarks: - Area regularly mowed

- No hydric soil indicators noted.

HYDROLOGY

✓ Recorded Data (Describe in Remarks)

___ No Recorded Data Available

___ Stream, Lake or Tide Gauge

✓ Aerial Photographs

Field Observations

___ Ground Surface Inundated ___ inches.

___ Soil Saturated.

Depth to Free Water ___ inches.

Depth to Saturated Soils ___ inches.

Wetland Hydrology Indicators:

Primary Indicators

___ Inundated

___ Saturated in upper 12 inches.

___ Water Marks

___ Drift Lines

___ Sediment Deposits

___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

___ Oxidized Root Channels in upper 12 inches

___ Water-Stained leaves

___ Local Soil Survey

___ Morphological Plant Adaptations

___ Other (Explain in Remarks)

Remarks:

No wetland hydrology noted.

Project Number: 09-022
Applicant: CWM
Date: 4/29/09
Plot ID Number: 1 u @ wet. N

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	fescues	(H) S/S T V	FACU	80
2	perennial rye grass	(H) S/S T V	FACU-	30
3	white clover	(H) S/S T V	FACU-	10
4		H S/S T V		
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 0

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No)

Hydric Soils Present? Yes or (No)

Wetland Hydrology Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or No (N/A)

Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/29/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type PFO/PSS

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: 0-16

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 1 W @ wet. O

SOILS

Series and Phase: Made Land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-5	O	10YR 2/2	None	Organic layer
5-14	A	10YR 3/2	10YR 5/6, Few >8"	Clay/gravel
14+	B	10YR 5/2	10YR 5/6 & 5/8, Common	Clay

Hydric Soil Indicators:

- ___ Histisols
- ___ Histic Epipedon
- ___ Sufidic Odor
- ___ Reducing Conditions
- X Concretions
- ___ High Org. Content in Surface Layer of Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Gleyed or Low Chroma color
- ___ Listed on Local Hydric Soils List
- ___ Listed as Potential for Hydric Inclusions Only
- ___ Other (Explain in Remarks)
- ___ Aquic Moisture Regime

Landscape position: concave X convex ___ sloping ___ Approximate slope: ___
flat ___ undulating ___

Remarks: Area split by road, connected by culvert, and mowed to edge in part of the area. well defined banks.
- organic substrate in drainage (leaves, grass, etc.)

HYDROLOGY

- X Recorded Data (Describe in Remarks)
- ___ No Recorded Data Available
- ___ Stream, Lake or Tide Gauge
- X Aerial Photographs

Field Observations
- X Ground Surface Inundated ~1 inches.
- X Soil Saturated.

Depth to Free Water 0 inches.

Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators
- X Inundated
- X Saturated in upper 12 inches.
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
- X Oxidized Root Channels in upper 12 inches
- X Water-Stained leaves
- ___ Local Soil Survey
- X Morphological Plant Adaptations *
- ___ Other (Explain in Remarks)

Remarks: Drainage ditch leading from roadside, under road, to off-site wetland area. * Buttressing
Avg. width = 8-10 ft.
Avg. depth: 3-4 in.
gentle flow & gradient

Project Number: 09-022
Applicant: CWM
Date: 4/29/09
Plot ID Number: 1 W @ wet. 0

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	red maple	H S/S (T) V	FAC	20
2	green ash	H S/S (T) V	FACW	40
3	Cottonwood	H S/S (T) V	FAC	30
4		H S/S T V		
5	honeysuckle	H (S/S) T V	FAC | FACW	25
6		H S/S T V		
7	wild grape	H S/S T (V)	FACU	20
8		H S/S T V		
9	No herbaceous layer	H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 90+
Percent of Dominant Species OBL, FACW ~60
50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No
Hydric Soils Present? (Yes) or No
Wetland Hydrology Present? (Yes) or No
Is this Sampling Point Within a Wetland? (Yes) or No
Hydrologic Connectivity to Off-site Wetlands? (Yes) or No
Is this Wetland Potentially Isolated? Yes or (No)

Remarks:
Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/29/06

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type: NDF/SS

Is the site significantly disturbed? Yes (No) Nearest Flag To Data Point: 0-16

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) Lu C wet. O

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-5	A	10YR 3/3	None	Silt loam
5+	B	10YR 4/3	None	Silt/Clay

Hydric Soil Indicators:

___Histisols ___Concretions ___ Listed on Local Hydric Soils List

___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___ Listed as Potential for Hydric Inclusions Only

___Sufidic Odor ___Organic Streaking in Sandy Soils ___ Other (Explain in Remarks)

___Reducing Conditions ___Gleyed or Low Chroma color ___ Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___

flat ___ undulating X

Remarks: No hydric soil indicators noted

HYDROLOGY

X Recorded Data (Describe in Remarks)

___ No Recorded Data Available

___ Stream, Lake or Tide Gauge

X Aerial Photographs

Field Observations

___ Ground Surface Inundated ___ inches.

___ Soil Saturated.

Depth to Free Water ___ inches.

Depth to Saturated Soils ___ inches.

Wetland Hydrology Indicators:

Primary Indicators

___ Inundated
___ Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

___ Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
___ Local Soil Survey
___ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 09-022
Applicant: CWM
Date: 4/29/09
Plot ID Number: 1 u @ Wet. O

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	red maple	H S/S (T) V	FAC	25
2	black cherry	H S/S (T) V	FACU	25
3		H S/S T V		
4	buckthorn	H (S/S) T V	NL	35
5	honeysuckle	H (S/S) T V	FAC/FACU	30
6		H S/S T V		
7	Canada goldenrod	(H) S/S T V	FACU	10
8	perennial rye grass	(H) S/S T V	FACU-	20
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC_____ Percent of Dominant Species OBL, FACW_____

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No)
Hydric Soils Present? Yes or (No)
Wetland Hydrology Present? Yes or (No)
Is this Sampling Point Within a Wetland? Yes or (No)
Hydrologic Connectivity to Off-site Wetlands? Yes or No (N/A)
Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks:
Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/29/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type PEM

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: P-20

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 1 WB @ wet-P

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-3	O	10YR 2/2	None	Silt loam/organic
3-13	A	10YR 3/2	10YR 5/6, few > 7"	Clay
13+	B	10YR 5/2	10YR 5/6, Common	Clay

Hydric Soil Indicators:

___Histisols ___Concretions ___Listed on Local Hydric Soils List
___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___Listed as Potential for Hydric Inclusions Only
___Sufidic Odor ___Organic Streaking in Sandy Soils ___Other (Explain in Remarks)
___Reducing Conditions ___Gleyed or Low Chroma color ___Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___
flat ___ undulating X

Remarks: - regularly mowed area

HYDROLOGY

X Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
X Aerial Photographs

Field Observations
X Ground Surface Inundated ~1 inches.
X Soil Saturated.

Depth to Free Water: 0 inches.
Depth to Saturated Soils: 0 inches.

Wetland Hydrology Indicators:

Primary Indicators
✓ Inundated
✓ Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
✓ Oxidized Root Channels in upper 12 inches
✓ Water-Stained leaves
___ Local Soil Survey
✓ Morphological Plant Adaptations *
___ Other (Explain in Remarks)

Remarks: Pockets of standing water. * Buttressing

Project Number: 09-022
Applicant: CWM
Date: 4/29/09
Plot ID Number: 1 W @ wet. P

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	red maple	H S/S (T) V	FAC	40
2	green ash	H S/S (T) V	FACW	30
3		H S/S T V		
4	sedges	(H) S/S T V	FACW/OBL	70
5	perennial rye grass	(H) S/S T V	FACU-	30
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC ~90
Percent of Dominant Species OBL, FACW ~65

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No
Hydric Soils Present? (Yes) or No
Wetland Hydrology Present? (Yes) or No
Is this Sampling Point Within a Wetland? (Yes) or No
Hydrologic Connectivity to Off-site Wetlands? (Yes) or No
Is this Wetland Potentially Isolated? Yes or (No)

Remarks:
Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/29/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type: maintained lawn

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: P-20

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 1 u @ wet. P

SOILS

Series and Phase: Made land Drainage Class: WD MWD SPD PD VPD

Subgroup: Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-4	A	10YR 3/3	None	Organic layer / silt loam
4-10	B	10YR 4/3	None	Fine Silt loam w some Clay
10+	C	10YR 5/2	None	Clay

Hydric Soil Indicators:

___Histisols ___Concretions ___ Listed on Local Hydric Soils List

___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___ Listed as Potential for Hydric Inclusions Only

___Sufidic Odor ___Organic Streaking in Sandy Soils ___ Other (Explain in Remarks)

___Reducing Conditions ___Gleyed or Low Chroma color ___ Aquic Moisture Regime

Landscape position: concave ____ convex ____ sloping ____ Approximate slope: ____

flat ____ undulating X

Remarks: mowed regularly. No hydric soil indicators noted.

HYDROLOGY

X Recorded Data (Describe in Remarks)

____ No Recorded Data Available

____ Stream, Lake or Tide Gauge

X Aerial Photographs

Field Observations

____ Ground Surface Inundated ____ inches.

____ Soil Saturated.

Depth to Free Water ____ inches.

Depth to Saturated Soils ____ inches.

Wetland Hydrology Indicators:

Primary Indicators

___ Inundated

___ Saturated in upper 12 inches.

___ Water Marks

___ Drift Lines

___ Sediment Deposits

___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

___ Oxidized Root Channels in upper 12 inches

___ Water-Stained leaves

___ Local Soil Survey

___ Morphological Plant Adaptations

___ Other (Explain in Remarks)

Remarks: No wetland hydrology noted.

Project Number: 09-022	Date: 4/29/09
Applicant: CWM	Plot ID Number: 14 @ wet. P

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	perennial rye grass	(H) S/S T V	FACU-	50
2	dandelion	(H) S/S T V	FACU-	10
3	white clover	(H) S/S T V	FACU-	20
4	common vetch	(H) S/S T V	FACU-	10
5	fescues	(H) S/S T V	FACU	10
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 0

Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No)

Hydric Soils Present? Yes or (No)

Wetland Hydrology Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or No (N/A)

Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks:

Photo Reference Number:

Environmental Design & Research
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/29/09

Town: Lewiston

Investigator: Trembath, Schwabenbauer County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No Community Type PFO/PEM

Is the site significantly disturbed? (Yes) No Nearest Flag To Data Point: Q-2

Is the area a potential Problem Area? Yes (No) Data Point ID: (i.e. 2W@Wetland G) 1 W @ wet-Q

SOILS

Series and Phase: Madalin silt loam Drainage Class: WD MWD SPD (PD) VPD

Subgroup: mucic Mollic Endoaqualfs Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-3	O	10YR 2/2	None	organic layer
3-12	A	10YR 3/2	10YR 5/6, Few > 7"	Clay
12+	B	10YR 5/2	10YR 5/6, Common	Clay

Hydric Soil Indicators:

___ Histisols
___ Histic Epipedon
___ Sulfidic Odor
___ Reducing Conditions
___ Concretions
___ High Org. Content in Surface Layer of Sandy Soils
___ Organic Streaking in Sandy Soils
___ Gleyed or Low Chroma color
___ Listed on Local Hydric Soils List
___ Listed as Potential for Hydric Inclusions Only
___ Other (Explain in Remarks)
___ Aquic Moisture Regime

Landscape position: concave ✓ convex ___ sloping ___ Approximate slope: ___
flat ___ undulating ___

Remarks: - Area regularly mowed.

HYDROLOGY

✓ Recorded Data (Describe in Remarks)
___ No Recorded Data Available
___ Stream, Lake or Tide Gauge
✓ Aerial Photographs

Field Observations
✓ Ground Surface Inundated 1-2 inches.
✓ Soil Saturated.

Depth to Free Water 0 inches.

Depth to Saturated Soils 0 inches.

Wetland Hydrology Indicators:

Primary Indicators
✓ Inundated
✓ Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)
___ Oxidized Root Channels in upper 12 inches
✓ Water-Stained leaves
___ Local Soil Survey
✓ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks: Buttressing. Pockets of standing water > 6" deep.

Project Number: 09-022
Applicant: CWM
Date: 4/29/09
Plot ID Number: 1 w @ wet. Q

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	red maple	H S/S (T) V	FAC	35
2	green ash	H S/S (T) V	FACW	25
3		H S/S T V		
4	silky dogwood	H (S/S) T V	FACW	25
5		H S/S T V		
6	Sedges	(H) S/S T V	FACW/OBL	75
7	water plantain	(H) S/S T V	OBL	10
8	green algae	(H) S/S T V	OBL	80
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 100
Percent of Dominant Species OBL, FACW 80+
50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) or No
Hydric Soils Present? (Yes) or No
Wetland Hydrology Present? (Yes) or No
Is this Sampling Point Within a Wetland? (Yes) or No
Hydrologic Connectivity to Off-site Wetlands? (Yes) or No
Is this Wetland Potentially Isolated? Yes or (No)

Remarks:
Photo Reference Number:

Appears to be linked hydrologically to wetland P through a buried culvert pipe (not exposed).

Environmental Design & Research
217 Montgomery Sueet, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
1987 COE Wetlands Delineation Manual

274 North Goodman Street
Rochester, New York 14607

Project No: 09-022 Applicant: CWM Date: 4/29/09

Investigator: Trembath, Schwabenbauer Town: Lewiston

County: Niagara

State: NY

Do normal circumstances exist on site? (Yes) No

Is the site significantly disturbed? (Yes) No

Is the area a potential Problem Area? Yes (No)

Community Type: maintained lawn

Nearest Flag To Data Point: Q-2

Data Point ID: (i.e. 2W@Wetland G): 1 u @ wet. Q

SOILS

Series and Phase: madilia silt loam Drainage Class: WD MWD SPD (PD) VPD

Subgroup: mesic Mollic Endoaqualfs Confirm Mapped Type: (Yes) No

Depth	Horizon	Matrix color	Mottle color/abundance	Texture, Structure, Other
0-7	A	10YR 3/3	None	Clay
7+	B	10YR 4/4	None	Clay

Hydric Soil Indicators:

___Histisols ___Concretions ___ Listed on Local Hydric Soils List

___Histic Epipedon ___High Org. Content in Surface Layer of Sandy Soils ___ Listed as Potential for Hydric Inclusions Only

___Sufidic Odor ___Organic Streaking in Sandy Soils ___ Other (Explain in Remarks)

___Reducing Conditions ___Gleyed or Low Chroma color ___ Aquic Moisture Regime

Landscape position: concave ___ convex ___ sloping ___ Approximate slope: ___

flat ___ undulating ✓

Remarks:
- Area regularly mowed
No hydric soil indicators noted.

HYDROLOGY

✓ Recorded Data (Describe in Remarks)

___ No Recorded Data Available

___ Stream, Lake or Tide Gauge

✓ Aerial Photographs

Field Observations

___ Ground Surface Inundated ___ inches.

___ Soil Saturated.

Depth to Free Water ___ inches.

Depth to Saturated Soils ___ inches.

Wetland Hydrology Indicators:

Primary Indicators

___ Inundated
___ Saturated in upper 12 inches.
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetland

Secondary Indicators (2 or more required)

___ Oxidized Root Channels in upper 12 inches
___ Water-Stained leaves
___ Local Soil Survey
___ Morphological Plant Adaptations
___ Other (Explain in Remarks)

Remarks:
No wetland hydrology noted.

Project Number: 09-022
Applicant: CWM
Date: 4/29/09
Plot ID Number: 1 u @ wet-Q

VEGETATION

	Dominant Plant Species:	Stratum: (circle one)	Indicator:	% Cover:
1	fescues	(H) S/S T V	FACU	50
2	perennial rye grass	(H) S/S T V	FACU-	50
3		H S/S T V		
4	red maple	H S/S (T) V	FAC	25
5		H S/S T V		
6		H S/S T V		
7		H S/S T V		
8		H S/S T V		
9		H S/S T V		
10		H S/S T V		
11		H S/S T V		
12		H S/S T V		
13		H S/S T V		
14		H S/S T V		
15		H S/S T V		
16		H S/S T V		

Percent of Dominant Species OBL, FACW, FAC 75 Percent of Dominant Species OBL, FACW 0

50/20 Rule Applied? Yes No

Remarks:

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes or (No) Hydric Soils Present? Yes or (No)

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

Hydrologic Connectivity to Off-site Wetlands? Yes or No (N/A) Is this Wetland Potentially Isolated? Yes or No (N/A)

Remarks: Photo Reference Number: