APPENDIX C

Fac Pond and Delineated Wetland Photographs

Photo 1 - Fac Pond 1/2

Photo 2 - Fac Pond 1/2

Photo 3 - Fac Pond 3

Photo 4 - Fac Pond 8

Photo 5 - Wetland A

Photo 6 - Wetland B

Photo 7 - Wetland C

Photo 8 - Wetland D

Photo 9 - Wetland G

Photo 10 - Wetland H

Photo 11 - Wetland J

Photo 12 - Wetland K

Photo 13 - Wetland L

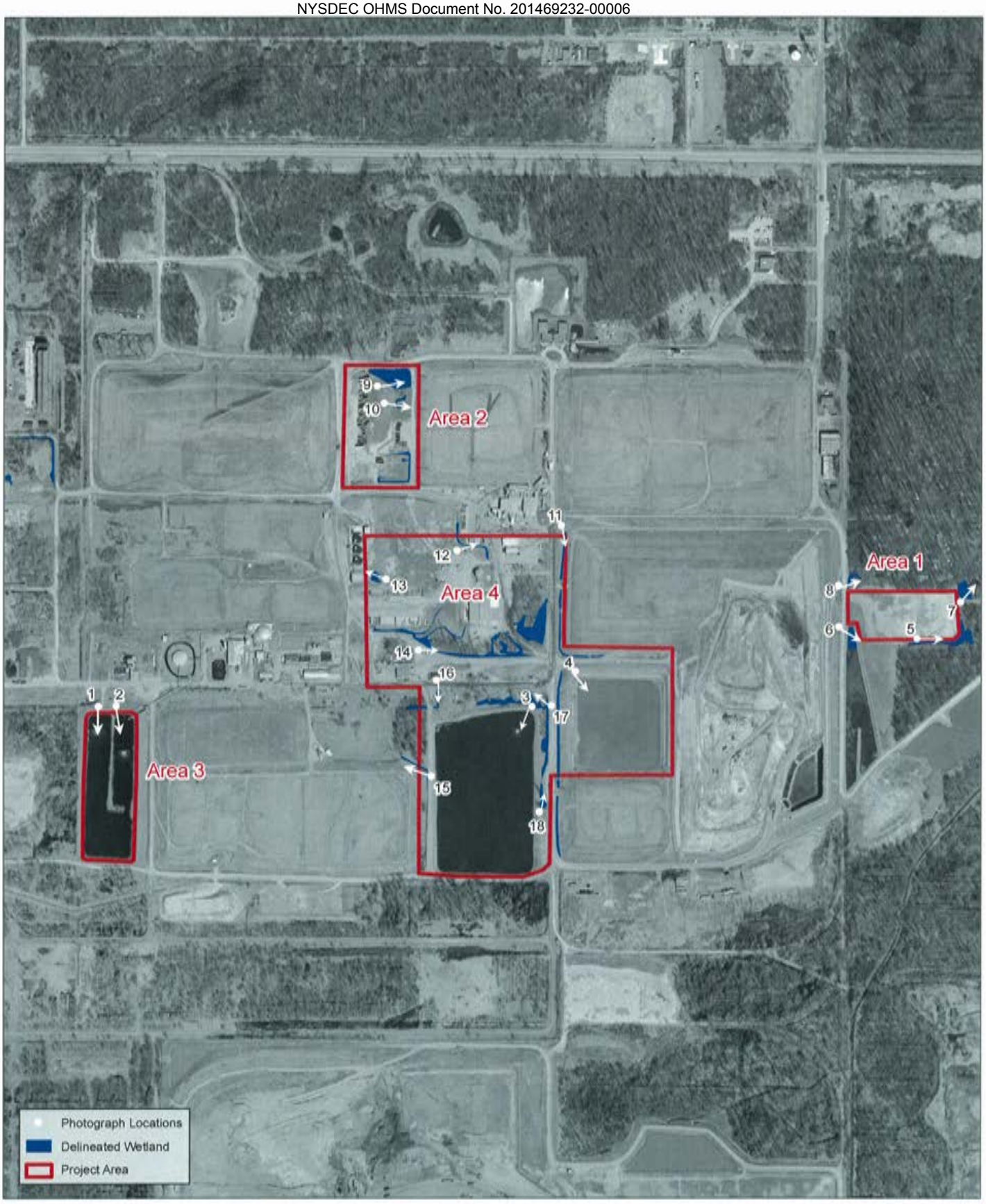
Photo 14 - Wetland M

Photo 15 - Wetland N

Photo 16 - Wetland O

Photo 17 - Wetland P

Photo 18 - Wetland Q



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Appendix C: Delineated Wetland Photographs

Photograph Location Map

Sheet 1 of 4

June 2009

EDR

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

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

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

April 29, 2011

Ms. Kathleen Buckler
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Re: Supplemental Request for Jurisdictional Determination

Dear Ms. Buckler:

On July 6, 2009, 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). The delineation report was submitted by CWM in anticipation of submittal of a revised 6NYCRR Part 373 Permit Application to the New York State Department of Environmental Conservation (NYSDEC), which was submitted on November 19, 2009. Based on the design submitted with the Part 373 Permit Application, an area proposed for development of RMU-2 was not previously delineated for wetlands in 2009.

CWM hired Environmental Design & Research, P.C. (EDR) to provide a supplemental wetlands delineation to determine potential impacts to wetlands associated with the RMU-2 project in the area that was not previously delineated. The attached is a supplement to the report entitled "Wetland Delineation Report, RMU-2 Landfill Expansion Area", dated June 2009, prepared by EDR, and contains the results of the supplemental wetlands evaluation. The attached supplemental report should be reviewed in conjunction with the June 2009 report.

CWM is anticipating that the NYSDEC review of the Part 373 Permit Application will be progressing over the next several months. Therefore, the wetlands evaluation is appropriate at this time. CWM would greatly appreciate an expeditious review of the wetlands delineation reports 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. Jonathan Rizzo at (716) 286-0354 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 according to 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 for knowing violations."

Ms. Kathleen Buckler
U.S. Army Corps of Engineers
April 29, 2011
Re: Supplemental Request for Jurisdictional Determination

Sincerely,
CWM CHEMICAL SERVICES, LLC

Jill A. Banaszak
Technical Manager
Model City Facility

JPR/JAB/jpr
Attachment

cc:

D. Denk	- NYSDEC/Region 9
D. Weiss	- NYSDEC/Region 9
B. Rostami	- NYSDEC/Region 9
M. Cruden	- NYSDEC/Albany, NY
T. Killeen	- NYSDEC/Albany, NY
M. Mortefolio	- NYSDEC/Albany, NY
H. Dudek	- NYSDEC/Albany, NY
G. Burke	- NYSDEC/Albany, NY
On-site Monitors	- NYSDEC/ Model City, NY
C. Stein	- USEPA/Region II
J. Devald	- NCHD/Lockport, NY
M. Mahar	- CWM/Model City, NY
R. Zayatz	- CWM/Model City, NY
J. Hino	- CWM/Model City, NY
S. Rydzyk	- CWM/Model City, NY
J. Hecklau	- EDR/Syracuse, NY
EMD Subject File	
Q & A	

edr COMPANIES

April 29, 2011

Mr. Jonathan Rizzo
Permitting Manager
CWM Chemical Services, LLC
1550 Balmer Road
Model City, New York 14107

RE: **RMU-2 Expansion Area**
Supplemental Wetland Delineation
edr Project No. 09022

Dear Mr. Rizzo:

On April 11, 2011, **edr** Companies (**edr**) conducted a supplemental wetland delineation at the CWM Chemical Services, LLC (CWM) Model Facility. The supplemental wetland delineation addresses an area between previously-delineation Areas 2 and 4 within the proposed RMU-2 expansion area (see revised Figure 8, Sheets 8 and 9). Results of the delineation represent an addendum to delineation of the RMU-2 expansion area conducted by **edr** in 2009 (**edr**, 2009).

The supplemental delineation work included field delineation of wetlands and ditches within the supplemental study area. The field delineation included flagging of wetland boundaries, mapping the boundaries with a global positioning system (GPS) unit with reported sub-meter accuracy, and collecting data regarding vegetation, soils, and hydrology for each delineated wetland. Data collection was conducted in accordance with the criteria set forth in the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987), and the *2009 Interim Regional Supplement to the Corps of Engineers Manual: Northcentral and Northeastern Region* (USACOE, 2009).

As a result of the supplemental wetland delineation, approximately 0.53 acre of emergent wetland and associated drainage channel were added to previously delineated Wetland K (See revised Figure 8, Sheets 8 and 9 attached). A revised description of Wetland K is enclosed as an attachment to this letter along with supplemental wetland determination data sheets. Also enclosed is a revised photograph location map and photo log (Appendix C) that includes photos of the area of the newly delineated portion of Wetland K.

Based on the July 7, 2010 jurisdictional determination meeting with representatives of the U.S. Army Corps of Engineers (Corps) and the results of the supplemental wetland delineation, **edr** anticipates that Wetland K will be determined a jurisdictional Water of the U.S. pursuant to the federal Clean Water Act. To verify the supplemental

274 North Goodman Street, Rochester, New York 14607
P. 585.271.0040 :: F. 585.271.0042 :: www.edrcompanies.com

wetland delineation boundary and it's jurisdictional status, a meeting with Corps representatives has been scheduled for May 3, 2011.

Please contact me if you have any questions or require additional information regarding this matter.

Sincerely
edr Environmental Services, LLC

James B. Pippin
Environmental Project Manager

References

Environmental Design & Research, Landscape Architecture, Planning, Environmental Services, Engineering and Surveying, P.C. (EDR, 2009). *Wetland Delineation Report.* Prepared for CWM Chemical Services.

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

U.S. Army Corps of Engineers. 2009 *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-09-19. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

Wetland K (Revised)

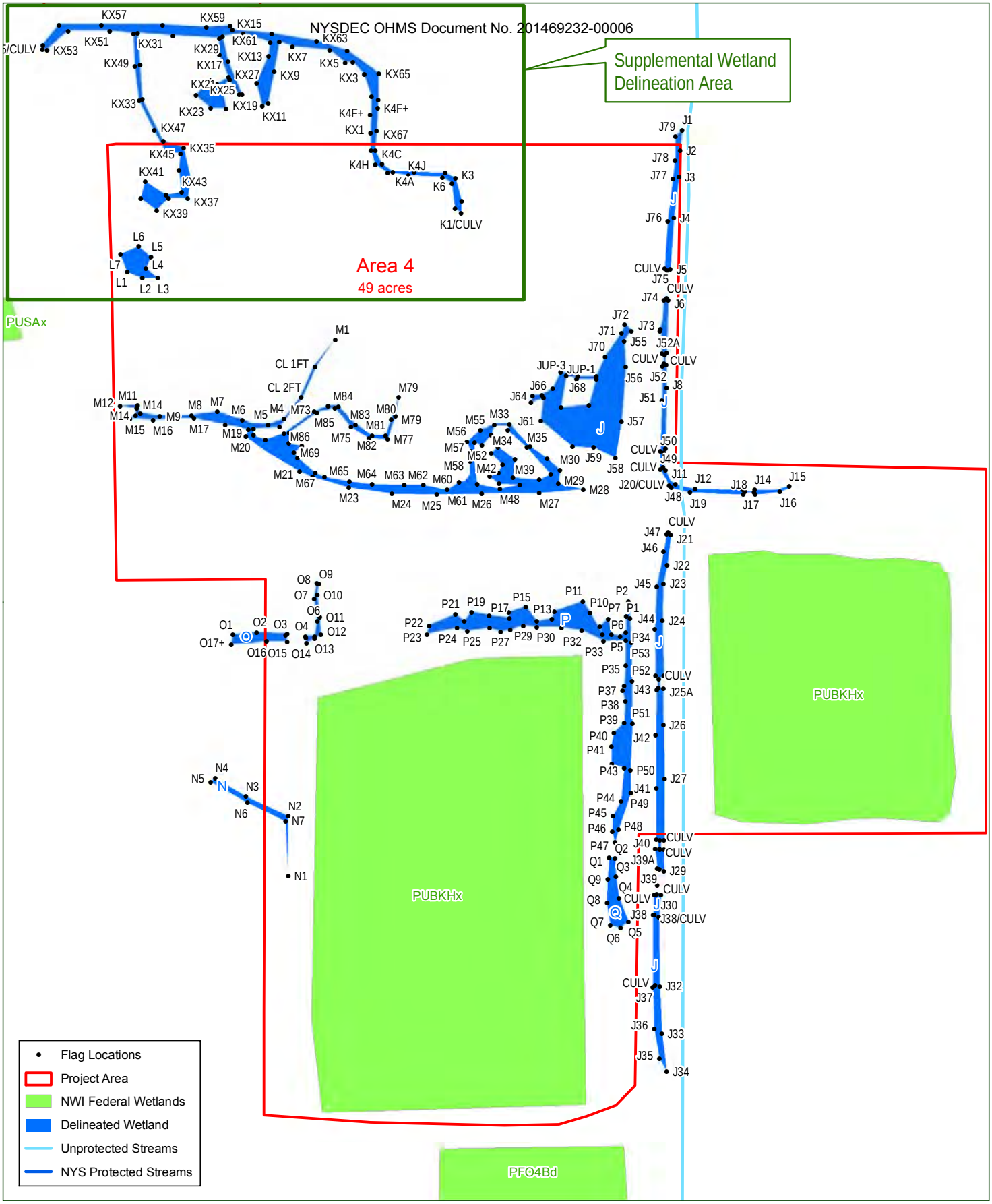
Located along the northern boundary of Area 4, Wetland K is predominantly a drainage channel receiving surface flow from an adjacent mowed grass lot. Several shallow depressional areas extend from the channel to the south into the maintained area (See Figure 8 Revised Delineated Wetlands, Sheets 8 and 9). The delineated portion of this wetland totals approximately 0.60 acre, however, the wetland extends beyond the delineated area and outside of the study area into a culvert to the west at Flag KX-55 (Appendix C, Photo 33). Wetland K is dominated by wetland vegetation, including common reed, common rush, silky dogwood, and sedges (Appendix C, Photo 12, 19, 23, 27, 31, 32, and 34). All areas of the wetland are periodically maintained and mowed, except in the wettest portions of the drainage ditch. Evidence of hydric soils includes low chroma matrix colors (10YR 3/2, 10YR 4/2, and 10YR 5/2) with common high chroma mottles (10YR 5/6) at wetland sampling point #1, concretions, and a texture consistent with clay. Primary indicators of hydric soils could best be characterized as a depleted matrix (F3). Evidence of wetland hydrology in the wetland at the time of delineation included inundation to a depth of 1-3 inches, saturated soils in the upper 12 inches, and water-stained leaves. Although Wetland K is primarily a drainage ditch receiving surface flow from a developed maintenance area and wash pad, it is believed that Wetland K flows west into waters of the U.S. and is likely to be considered jurisdictional due to the natural flow from the emergent wetlands identified during the supplemental delineation.

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 points were dominated by fescues, with some perennial rye grass, white clover, Queen Anne's lace and dandelion present in smaller percentages. There was no evidence of wetland hydrology in these areas, and the soils exhibited non hydric characteristics with colors of 10YR 4/3, 10YR 4/4 and 10YR 5/4.

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[3]	0.60	0.60	EM/Drainage	Yes	0.60	0.60	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	**3.78**	**3.09**			**2.54**	**1.96**			

[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.
[3] A supplemental wetland delineation was conducted on April 11, 2011 resulting in additional acreage for Wetland K.



CWM Landfill Expansion

Town of Porter - Niagara County, New York

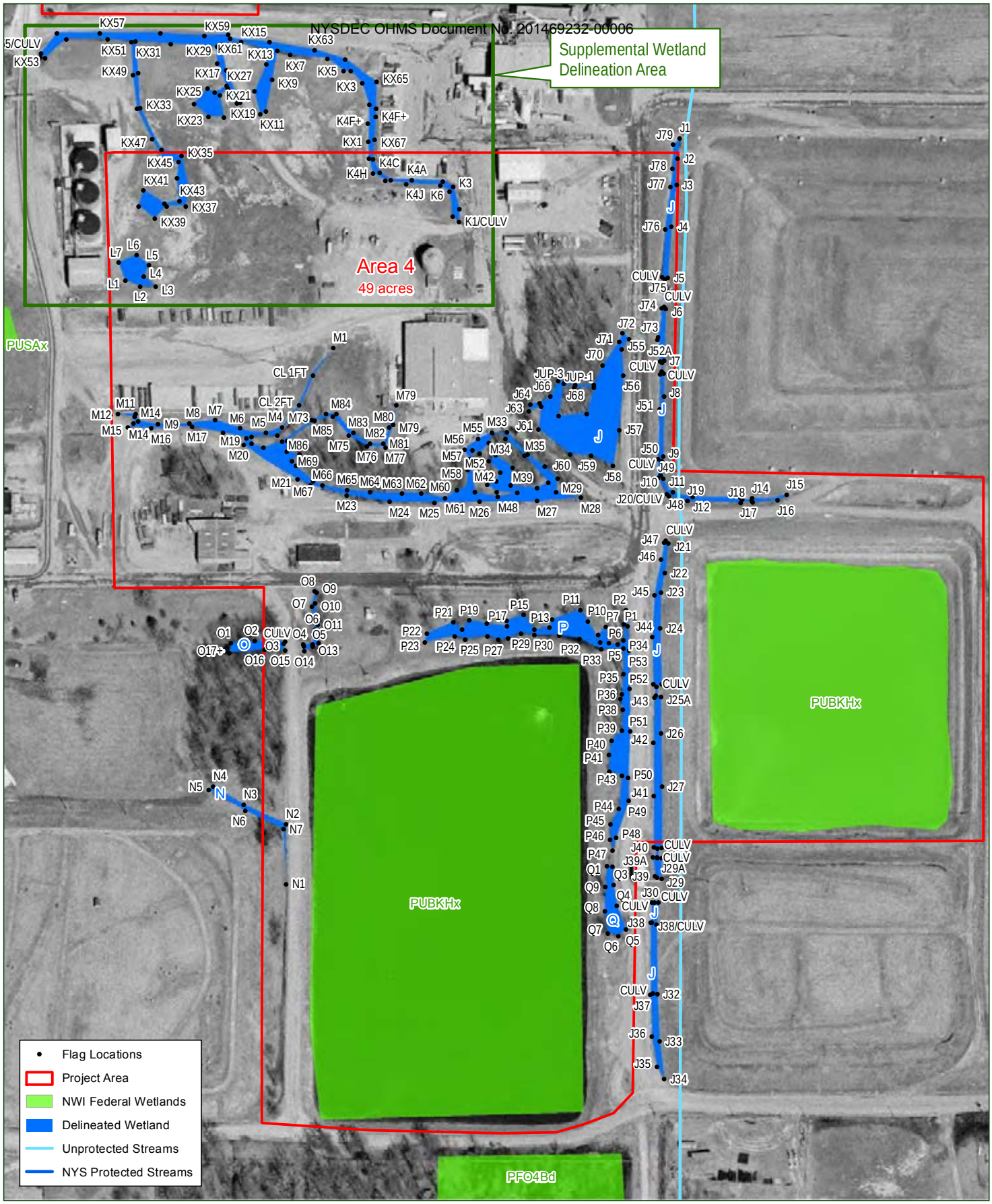
Wetland Delineation Report

Figure 8: Revised Delineated Wetlands

Sheet 8 of 9

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

Revised April 2011



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 8: Revised Delineated Wetlands

Sheet 9 of 9

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

Revised April 2011

Photo 1 - Fac Pond 1/2

Photo 2 - Fac Pond 1/2

Photo 3 - Fac Pond 3

Photo 4 - Fac Pond 8

Photo 5 - Wetland A

Photo 6 - Wetland B

Photo 7 - Wetland C

Photo 8 - Wetland D

Photo 9 - Wetland G

Photo 10 - Wetland H

Photo 11 - Wetland J

Photo 12 - Wetland K

Photo 13 - Wetland L

Photo 14 - Wetland M

Photo 15 - Wetland N

Photo 16 - Wetland O

Photo 17 - Wetland P

Photo 18 - Wetland Q

Photo 19 - Emergent Wetland/Drainage Ditch at Flag KX-59

Photo 20 - Upland Edge along Wetland/ Drainage Ditch at Flag KX-59

Photo 21 - Wetland Soil Sample at Flag KX-59

Photo 22 - Upland Soil Sample at Flag KX-59

Photo 23 - Emergent Wetland at Flag KX-23

Photo 24 - Upland Area Adjacent to Flag KX-23

Photo 25 - Wetland Soil Sample at Flag KX-23

Photo 26 - Upland Soil Sample at Flag KX-23

Photo 27 - Emergent Wetland at Flag KX-39

Photo 28- Upland Area Adjacent to Flag KX-39

Photo 29 - Wetland Soil Sample at Flag KX-39

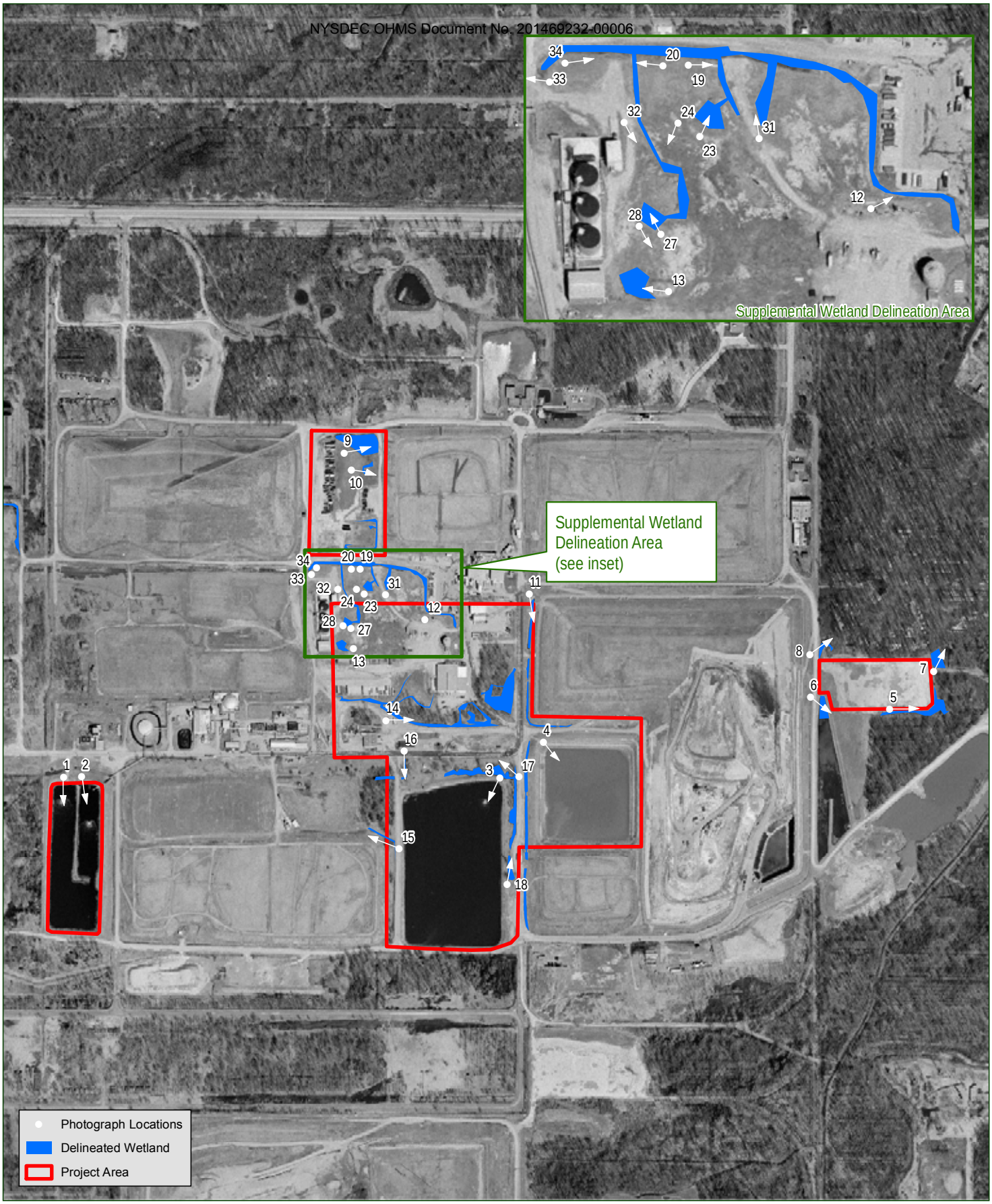
Photo 30 - Upland Soil Sample at Flag KX-39

Photo 31 - Emergent Wetland at Flag KX-11

Photo 32 - Emergent Wetland at Flag KX-33

Photo 33 - Twin Culvert at Flag KX-54

Photo 34 - Emergent Wetland/Drainage Ditch at Flag KX-54



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Appendix C: Delineated Wetland Photographs
Photograph Location Map - Revised

April 2011

Notes:
Base Map: 2-foot orthoimagery, black and white.

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

edr Companies
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 09022
Town: Porter
Sampling Date: 4/11/11
County: Niagara
Applicant: CWM Model City
State: New York
Community: PEM / Drainage Ditch
Data Point ID (i.e. 2W@Wet. G): 2W@ Wetland K
Nearest Flag to Data Point: K-X-59

Investigator(s): Pippin

Landform: **Hillside/Seep** **Toe of Slope** **(Depressional)** **Riparian**

Landscape Position: **Flat** **Undulating** **Sloping** **Convex** **(Concave)**

Are climatic/hydrologic conditions on the site typical for this time of year? **(Yes)** **No**

Do Normal Circumstances exist on site? **(Yes)** **No**

Is the area a potential problem area? **Yes** **(No)**

Is the site significantly disturbed? **(Yes)** **(No)**

Approximate Slope (%): 2%

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ✓ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Water-Stained Leaves (B9)
- ✓ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain In Remarks)

Secondary Indicators (min. - 2 required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D-1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes ✓ No ___
Saturated Conditions? Yes ✓ No ___

Depth of Water (inches): 2-3"
Depth to Sat. Soil (inches): 0"
Depth to Water (inches): 0"

Stream Association (Take a Stream Inventory Data Form for each stream identified in Study Area)

Record observations (e.g. location, stream type, adjacent community type, state protected etc.) of any streams within or adjacent to the Study Area:

Drainage ditch along road with wetland features. NO stream characteristics. ✓

Remarks

Project Number: 09022
Applicant: CWM Model City

Sampling Date: 4/11/11
Data Point ID: 2W@ Wetland K

Vegetation

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Salix sp.	<5	NO	
2.			
3.			
4.			
5			
	= Total Cover		

Herb Stratum (Plot size: 5-foot radius)			
1. Phragmites australis	90	Yes	FACW
2. Juncus effusus	5	NO	FACW
3. Carex sp.	5	NO	OBL
4. Manna grass (Glyceria sp.)	5	NO	OBL
5			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		

Woody Vine Stratum (Plot size: 30-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
- __ Rapid Test for Hydrophytic Vegetation
- ✓ Dominance Test >50%
- __ Prevalence Index is ≤3.0[1]
- __ Morphological Adaptations[1] (provide supporting data in remarks)
- __ Problematic Hydrophytic Vegetation[1] (explain in remarks)

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

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

Remarks

Salix located along edges in small amounts. Predominantly a Phragmites drainage ditch.

Project Number: 09022 Sampling Date: 4/11/11

Applicant: CWM Model City Data Point ID: 2W@ Wetland K

Soil Map Unit: ME Made land

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redux Features Color (moist)	Redux Features Frequency[1]	Redux Features Type[2]	Redux Features Loc[3]	Texture, Structure, Other
0-16+	10YR 4/2	100	—	—	—	—	Clay

[1]Frequency: F=Few, MA=Moderately Abundant, C=Common

[2]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

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

Hydric Soil Indicators

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8)
___ Thin Dark Surface (S9)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
✓ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Problematic Hydric Soil Indicators[3]

___ 2 cm Muck (A10)
___ Coast Prairie Redox (A16)
___ 5 cm Mucky Peat or Peat (S3)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8)
___ Thin Dark Surface (S9)
___ Iron-Manganese Masses (F12)
___ Piedmont Floodplain Soils F19)
___ Mesic Spodic (TA6)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____

Depth (inches): _____

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

Remarks

Wetland Determination

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

Hydrologic Connectivity to Off-site Wetlands? (Yes) No N/A
Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? (Yes) No N/A
Is this Wetland Potentially Isolated? Yes (No) N/A

Is the wetland mapped in the NWI? Yes (No) If yes, indicate classification _____
Is the wetland a mapped state wetland? Yes (No) If yes, indicate wetland ID _____

edr Companies
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 09022
Town: Porter
Sampling Date: 4/11/11
County: Niagara
Applicant: CWM Model City
State: New York
Community: Upland mowed lot
Data Point ID (i.e. 2W@Wet. G): 2u@Wetland K
Nearest Flag to Data Point: KX-59

Investigator(s): Pippin

Landform: Hillside/Seep Toe of Slope (Depressional) Riparian

Landscape Position: Flat Undulating Sloping Convex (Concave)

Are climatic/hydrologic conditions on the site typical for this time of year? (Yes) No

Do Normal Circumstances exist on site? (Yes) No

Is the area a potential problem area? Yes (No)

Is the site significantly disturbed? (Yes) No

Approximate Slope (%): 2%

Hydrology - No hydrology observed

Primary Indicators (min. - 1 required; check all that apply)
___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain In Remarks)

Secondary Indicators (min. - 2 required)
___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D-1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations
Inundation Present? Yes ____ No ✓
Saturated Conditions? Yes ____ No ✓

Depth of Water (inches): ____
Depth to Sat. Soil (inches): ____
Depth to Water (inches): ____

Stream Association (Take a Stream Inventory Data Form for each stream identified in Study Area)

Record observations (e.g. location, stream type, adjacent community type, state protected etc.) of any streams within or adjacent to the Study Area:

N/A

Remarks

Project Number: 09022
Applicant: CWM Model City

Sampling Date: 4/11/11
Data Point ID: 2W @ wetland K

Vegetation

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		
Herb Stratum (Plot size: 5-foot radius)			
1. Upland grasses	60	Yes	upl
2. Aster sp.	10	No	upl
3. fescue	20	No	Fac
4. Queen Anne's lace	5	NO	upl
5			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size: 30-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ Rapid Test for Hydrophytic Vegetation
__ Dominance Test >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (provide supporting data in remarks)
__ Problematic Hydrophytic Vegetation[1] (explain in remarks)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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

Remarks

Non-hydrophytic dominated. maintained lot near facility.

Project Number: 09022 Sampling Date: 4/11/11

Applicant: CWM Model City Data Point ID: Zu@ Wetland K

Soil Map Unit: Me Made land

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redux Features Color (moist)	Redux Features Frequency[1]	Redux Features Type[2]	Redux Features Loc[3]	Texture, Structure, Other
0-16+	10YR 5/3	100	—	—	—	—	Clay

[1]Frequency: F=Few, MA=Moderately Abundant, C=Common
[2]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains
[3]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8)
___ Thin Dark Surface (S9)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
WD Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Problematic Hydric Soil Indicators[3]

___ 2 cm Muck (A10)
___ Coast Prairie Redox (A16)
___ 5 cm Mucky Peat or Peat (S3)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8)
___ Thin Dark Surface (S9)
___ Iron-Manganese Masses (F12)
___ Piedmont Floodplain Soils F19)
___ Mesic Spodic (TA6)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____

Depth (inches): _____

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

Remarks Uplad Soil. Most likely disturbed or fill from past operations.

Wetland Determination

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

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No If yes, indicate classification _____
Is the wetland a mapped state wetland? Yes No If yes, indicate wetland ID _____

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DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 09022 Town: Porter Sampling Date: 4/11/11
County: Niagara
Applicant: Cwm Model City State: New York Community: PEM
Data Point ID (i.e. 2W@Wet. G): 3w@Wetland K Nearest Flag to Data Point: KX-23

Investigator(s): Riparian

Landform: **Hillside/Seep** **Toe of Slope** **Depressional** **Riparian**

Landscape Position: **Flat** **Undulating** **Sloping** **Convex** **Concave**

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** **No**

Do Normal Circumstances exist on site? **Yes** **No**

Is the area a potential problem area? **Yes** **No**

Is the site significantly disturbed? **Yes** **No**

Approximate Slope (%): 0

Hydrology

Primary Indicators (min. - 1 required; check all that apply)
- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ✓ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain In Remarks)

Secondary Indicators (min. - 2 required)
- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D-1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations

Inundation Present?	Yes ✓	No ___	Depth of Water (inches): 3
Saturated Conditions?	Yes ✓	No ___	Depth to Sat. Soil (inches): 0
			Depth to Water (inches): 0

Stream Association (Take a Stream Inventory Data Form for each stream identified in Study Area)

Record observations (e.g. location, stream type, adjacent community type, state protected etc.) of any streams within or adjacent to the Study Area:

N/A

Remarks

Project Number: 09022
Applicant: CWM Model City

Sampling Date: 4/11/11
Data Point ID: 3W@ Wetland K

Vegetation

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		
Herb Stratum (Plot size: 5-foot radius)			
1. Phragmites australis	80	Yes	FACW
2. Carex sp.	20	no	OBL
3.			
4.			
5			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size: 30-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ Rapid Test for Hydrophytic Vegetation
__ Dominance Test >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (provide supporting data in remarks)
__ Problematic Hydrophytic Vegetation[1] (explain in remarks)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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

Remarks

PEM wetland mowed frequently (maintained).

Project Number: 09022 Sampling Date: 4/11/11

Applicant: CWSM Model City Data Point ID: 3W@wetland K

Soil Map Unit: Me Made land

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redux Features Color (moist)	Redux Features Frequency[1]	Redux Features Type[2]	Redux Features Loc[3]	Texture, Structure, Other
0-16+	7.5YR 4/2	100	—	—	—	—	Clay

[1]Frequency: F=Few, MA=Moderately Abundant, C=Common

[2]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

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

Hydric Soil Indicators

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8)
___ Thin Dark Surface (S9)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
✓ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Problematic Hydric Soil Indicators[3]

___ 2 cm Muck (A10)
___ Coast Prairie Redox (A16)
___ 5 cm Mucky Peat or Peat (S3)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8)
___ Thin Dark Surface (S9)
___ Iron-Manganese Masses (F12)
___ Piedmont Floodplain Soils F19)
___ Mesic Spodic (TA6)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____

Depth (inches): _____

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

Remarks

most likely a disturbed soil but does have hydric characteristics.

Wetland Determination

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

Hydrologic Connectivity to Off-site Wetlands? (Yes) No N/A
Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? (Yes) No N/A
Is this Wetland Potentially Isolated? Yes (No) N/A

Is the wetland mapped in the NWI? Yes (No) If yes, indicate classification _____
Is the wetland a mapped state wetland? Yes (No) If yes, indicate wetland ID _____

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DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 09022 Town: Porter Sampling Date: 4/11/11
County: Niagara
Applicant: CWM Model City State: New York Community: Upland mowed lot
Data Point ID (i.e. 2W@Wet. G): 3W@ wetlal K Nearest Flag to Data Point: K-K-23

Investigator(s): Pippin

Landform: Hillside/Seep Toe of Slope (Depressional) Riparian

Landscape Position: Flat Undulating Sloping Convex (Concave)

Are climatic/hydrologic conditions on the site typical for this time of year? (Yes) No

Do Normal Circumstances exist on site? (Yes) No

Is the area a potential problem area? Yes (No)

Is the site significantly disturbed? (Yes) No

Approximate Slope (%): 0

Hydrology - no hydrology observed.

Primary Indicators (min. - 1 required; check all that apply)
___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain In Remarks)

Secondary Indicators (min. - 2 required)
___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D-1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations
Inundation Present? Yes ____ No ✓
Saturated Conditions? Yes ____ No ✓

Depth of Water (inches): 0
Depth to Sat. Soil (inches): >16
Depth to Water (inches): >16

Stream Association (Take a Stream Inventory Data Form for each stream identified in Study Area)

Record observations (e.g. location, stream type, adjacent community type, state protected etc.) of any streams within or adjacent to the Study Area:

N/A

Remarks

Project Number: 09022
Applicant: Cwm Model City

Sampling Date: 4/14/11
Data Point ID: 3W@ wetland K

Vegetation

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		

Herb Stratum (Plot size: 5-foot radius)			
1. Aster sp.	20		upl
2. Fescue	20		upl
3. Clover	10		facu
4.			
5			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		

Woody Vine Stratum (Plot size: 30-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 0 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ Rapid Test for Hydrophytic Vegetation
__ Dominance Test >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (provide supporting data in remarks)
__ Problematic Hydrophytic Vegetation[1] (explain in remarks)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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

Remarks

mowed / maintained lot.

Project Number: 09022 Sampling Date: 4/11/11

Applicant: CWM Model City Data Point ID: 3w@ wetlal k

Soil Map Unit: Me Made land

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redux Features Color (moist)	Redux Features Frequency[1]	Redux Features Type[2]	Redux Features Loc[3]	Texture, Structure, Other
0-16+	10YR 5/4	100	—	—	—	—	Clay

[1]Frequency: F=Few, MA=Moderately Abundant, C=Common

[2]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

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

Hydric Soil Indicators

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

Problematic Hydric Soil Indicators[3]

___ 2 cm Muck (A10)
___ Coast Prairie Redox (A16)
___ 5 cm Mucky Peat or Peat (S3)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8)
___ Thin Dark Surface (S9)
___ Iron-Manganese Masses (F12)
___ Piedmont Floodplain Soils F19)
___ Mesic Spodic (TA6)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____

Depth (inches): _____

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

Remarks

Non hydric Soil.

Wetland Determination

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

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No If yes, indicate classification _____
Is the wetland a mapped state wetland? Yes No If yes, indicate wetland ID _____

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DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 09022 Town: Porter Sampling Date: 4/11/11
County: Niagara
Applicant: CWM Model City State: New York Community: PEM
Data Point ID (i.e. 2W@Wet. G): 4W@ wetland K Nearest Flag to Data Point: KX-39

Investigator(s): Pippin

Landform: **Hillside/Seep** **Toe of Slope** **Depressional** **Riparian**

Landscape Position: **Flat** **Undulating** **Sloping** **Convex** **Concave**

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** **No**

Do Normal Circumstances exist on site? **Yes** **No**

Is the area a potential problem area? **Yes** **No**

Is the site significantly disturbed? **Yes** **No**

Approximate Slope (%): 0%

Hydrology

Primary Indicators (min. - 1 required; check all that apply)

- ✓ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ✓ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ✓ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain In Remarks)

Secondary Indicators (min. - 2 required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D-1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations

Inundation Present? Yes ✓ No ___
Saturated Conditions? Yes ✓ No ___

Depth of Water (inches): 2"
Depth to Sat. Soil (inches): 0"
Depth to Water (inches): 0"

Stream Association (Take a Stream Inventory Data Form for each stream identified in Study Area)

Record observations (e.g. location, stream type, adjacent community type, state protected etc.) of any streams within or adjacent to the Study Area:

N/A

Remarks

Project Number: 09622
Applicant: CWM Model City

Sampling Date: 4/5/11
Data Point ID: 4W@ wetland K

Vegetation

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		
Herb Stratum (Plot size: 5-foot radius)			
1. Phragmites australis	40	yes	facw
2. Carex sp.	20	yes	obl
3. Juncus effusus	10	no	obl
4.			
5			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		
Woody Vine Stratum (Plot size: 30-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ Rapid Test for Hydrophytic Vegetation
__ Dominance Test >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (provide supporting data in remarks)
__ Problematic Hydrophytic Vegetation[1] (explain in remarks)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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

Remarks

Project Number: 09022 Sampling Date: 4/11/11

Applicant: CWM Model City Data Point ID: 4w@ wetland K

Soil Map Unit: Me Made land

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redux Features Color (moist)	Redux Features Frequency[1]	Redux Features Type[2]	Redux Features Loc[3]	Texture, Structure, Other
0-16	7.5YR 4/2		—	—	—	—	Clay

[1]Frequency: F=Few, MA=Moderately Abundant, C=Common

[2]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

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

Hydric Soil Indicators

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8)
___ Thin Dark Surface (S9)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
✓ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Problematic Hydric Soil Indicators[3]

___ 2 cm Muck (A10)
___ Coast Prairie Redox (A16)
___ 5 cm Mucky Peat or Peat (S3)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8)
___ Thin Dark Surface (S9)
___ Iron-Manganese Masses (F12)
___ Piedmont Floodplain Soils F19)
___ Mesic Spodic (TA6)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____

Depth (inches): _____

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

Remarks

Wetland Determination

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

Hydrologic Connectivity to Off-site Wetlands? (Yes) No N/A
Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? (Yes) No N/A
Is this Wetland Potentially Isolated? Yes (No) N/A

Is the wetland mapped in the NWI? Yes (No) If yes, indicate classification _____
Is the wetland a mapped state wetland? Yes (No) If yes, indicate wetland ID _____

edr Companies
217 Montgomery Street, Suite 1000
Syracuse, New York 13202

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

274 North Goodman Street
Rochester, New York 14607

Project Number: 09022 Town: Porter Sampling Date: 4/14/11
County: Niagara
Applicant: Cwm Model City State: New York Community: Upland Mowed lot
Data Point ID (i.e. 2W@Wet. G): True Wetland K Nearest Flag to Data Point: KX-39

Investigator(s): Pippin

Landform: **Hillside/Seep** **Toe of Slope** **Depressional** **Riparian**

Landscape Position: **Flat** **Undulating** **Sloping** **Convex** **Concave**

Are climatic/hydrologic conditions on the site typical for this time of year? **Yes** **No**

Do Normal Circumstances exist on site? **Yes** **No**

Is the area a potential problem area? **Yes** **No**

Is the site significantly disturbed? **Yes** **No**

Approximate Slope (%): 0

Hydrology

Primary Indicators (min. - 1 required; check all that apply)
___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain In Remarks)

Secondary Indicators (min. - 2 required)
___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D-1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations
Inundation Present? Yes ____ No ✓
Saturated Conditions? Yes ____ No ✓

Depth of Water (inches): ____
Depth to Sat. Soil (inches): ____
Depth to Water (inches): ____

Stream Association (Take a Stream Inventory Data Form for each stream identified in Study Area)

Record observations (e.g. location, stream type, adjacent community type, state protected etc.) of any streams within or adjacent to the Study Area:

N/A

Remarks - Uplnd located in maintained lot near depressional PEM wetland located near fill piles associated with previous site work.

Project Number: 04022
Applicant: CWM Model City

Sampling Date: 4/6/11
Data Point ID: 4u@ wetland K

Vegetation

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		

Herb Stratum (Plot size: 5-foot radius)			
1. Aster sp.	20	yes	upl
2. Clover	20	yes	facu
3. fescue	20	yes	upl
4. Thistle	10	no	upl
5			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		

Woody Vine Stratum (Plot size: 30-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ Rapid Test for Hydrophytic Vegetation
__ Dominance Test >50%
__ Prevalence Index is ≤3.0[1]
__ Morphological Adaptations[1] (provide supporting data in remarks)
__ Problematic Hydrophytic Vegetation[1] (explain in remarks)
[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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

Remarks

Project Number: 09022 Sampling Date: 4/11/11

Applicant: cwm Model City Data Point ID: Aug wetland K

Soil Map Unit: Me Made land

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redux Features Color (moist)	Redux Features Frequency[1]	Redux Features Type[2]	Redux Features Loc[3]	Texture, Structure, Other
0-16	10YR 4/4		—	—	—	—	Clay

[1]Frequency: F=Few, MA=Moderately Abundant, C=Common

[2]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains

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

Hydric Soil Indicators

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

Problematic Hydric Soil Indicators[3]

___ 2 cm Muck (A10)
___ Coast Prairie Redox (A16)
___ 5 cm Mucky Peat or Peat (S3)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8)
___ Thin Dark Surface (S9)
___ Iron-Manganese Masses (F12)
___ Piedmont Floodplain Soils F19)
___ Mesic Spodic (TA6)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in remarks)

Restrictive Layer (if observed)

Type: _____

Depth (inches): _____

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

Remarks

Non hydric.

Wetland Determination

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

Hydrologic Connectivity to Off-site Wetlands? Yes No N/A
Does Any Part of this Delineated Wetland/Stream Extend Past the Flagged Boundary? Yes No N/A
Is this Wetland Potentially Isolated? Yes No N/A

Is the wetland mapped in the NWI? Yes No If yes, indicate classification _____
Is the wetland a mapped state wetland? Yes No If yes, indicate wetland ID _____

DEPARTMENT OF THE ARMY
BUFFALO DISTRICT, CORPS OF ENGINEERS
1776 NIAGARA STREET
BUFFALO, NEW YORK 14207-3199

September 13, 2011

REPLY TO
Regulatory Branch

SUBJECT: Department of the Army Application No. 2000-01534

Mr. James Pippin
Environmental Design & Research
274 North Goodman Street
Rochester, NY 14607

Dear Mr. Pippin:

This pertains to your proposal, on behalf of CWM Chemical Services, to potentially develop approximately 64 acres of land adjacent to Fourmile Creek, located on the CWM Model City facility, in the Town of Porter, Niagara County, New York.

Section 404 of the Clean Water Act establishes Corps of Engineers jurisdiction over the discharge of dredged or fill material into waters of the United States, including wetlands, as defined in 33 CFR Part 328.3.

I am hereby verifying the Federal wetland boundary as shown on the attached wetland delineation map dated June 2009. This verification was confirmed on November 17, 2010 and April 29, 2011 and will remain valid for a period of five (5) years from the date of this correspondence unless new information warrants revision of the delineation before the expiration. At the end of this period, a new wetland delineation will be required if a project has not been completed on this property and additional impacts are proposed for waters of the United States. Further, this delineation/determination has been conducted to identify the limits of the Corps Clean Water Act jurisdiction for the particular site identified in this request. This delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resource Conservation Service prior to starting work.

Based upon my review of the submitted delineation and on-site observations, I have determined that wetland areas A, B, C, D, G, H, I, J, K, KX, M, N, and O on the subject parcel are part of a surface water tributary system to a navigable water of the United States as noted on the attached Jurisdictional Determination form. Therefore, the wetlands are regulated under Section 404 of the Clean Water Act. Department of the Army authorization is required if you propose a discharge of dredged or fill material in these areas.

In addition, I have determined that there is no clear surface water connection or ecological continuum between **wetland areas L, P, and Q** on the parcel and a surface tributary system to a navigable water of the United States. Therefore, these waters are considered isolated, non-navigable, intrastate waters and not regulated under Section 404 of the Clean Water

Act. Accordingly, you do not need Department of the Army authorization to commence work in these areas.

I encourage you to contact the appropriate state and local governmental officials to ensure that the proposed work complies with their requirements.

Finally, this letter contains an approved jurisdictional determination for the subject parcel. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal the above determination, you must submit a completed RFA form within 60 days of the date on this letter to the Great Lakes/Ohio River Division Office at the following address:

Ms. Pauline Thorndike
Review Officer
Great Lakes and Ohio River Division
CELRD-PDS-O
550 Main Street, Room 10032
Cincinnati, OH 45202-3222
Phone: 513-684-6212

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by **November 14, 2011**.

It is not necessary to submit an RFA to the Division office if you do not object to the determination in this letter.

A copy of this correspondence without enclosures has been forwarded to Mr. Jonathan Rizzo – CWM permitting manager.

Questions pertaining to this matter should be directed to me by calling (716) 879-4303, by writing to the following address: U.S. Army Corps of Engineers, 1776 Niagara Street, Buffalo, New York 14207, or by e-mail at: kathleen.a.buckler@usace.army.mil

Sincerely,

Kathleen Buckler
Biologist

Enclosures

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: CWM Chemical Facility	File Number: 2000-01534	Date: September 13, 2011

Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.army.mil/CECW/Pages/reg_materials.aspx or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- **OBJECT:** If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- **ACCEPT:** If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.

- **APPEAL:** If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- **ACCEPT:** You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.

- **APPEAL:** If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

SECTION II - REQUEST FOR APPEAL or OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION:

If you have questions regarding this decision and/or the appeal process you may contact:	If you only have questions regarding the appeal process you may also contact:
Kathleen Buckler U.S. Army Corps of Engineers 1776 Niagara Street Buffalo, New York 14207 (716) 879-4303 Kathleen.a.buckler@usace.army.mil	Ms. Pauline Thorndike, Review Officer U.S. Army Corps of Engineers Great Lakes and Ohio River Division 550 Main Street, Room 10032 Cincinnati, OH 45202-3222 (513) 684-6212;FAX(513) 684-2460 pauline.d.thorndike@usace.army.mil

RIGHT OF ENTRY: Your signature below grants the right of entry to Corps of Engineers personnel, and any government consultants, to conduct investigations of the project site during the course of the appeal process. You will be provided a 15 day notice of any site investigation, and will have the opportunity to participate in all site investigations.

	Date:	Telephone number:
_____ Signature of appellant or agent.		

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): July 13, 2011

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB 2000-01534; CWM - Landfill Expansion; JD for Wetland A, B, C, D, L, P, and Q. Form 1 of 6.

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: New York County/parish/borough: Niagara City: Model City
Center coordinates of site (lat/long in degree decimal format): Lat. 43.223° N, Long. -78.963° W.
Universal Transverse Mercator: 17
Name of nearest waterbody: Twelvemile Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Ontario
Name of watershed or Hydrologic Unit Code (HUC): 04130001
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☒ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: July 13, 2011
☒ Field Determination. Date(s): November 17, 2010 and April 29, 2011

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
   ☐ TNWs, including territorial seas
   ☐ Wetlands adjacent to TNWs
   ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
   ☐ Non-RPWs that flow directly or indirectly into TNWs
   ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   ☐ Impoundments of jurisdictional waters
   ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: linear feet: width (ft) and/or acres.
   Wetlands: 0.52 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
   Elevation of established OHWM (if known):

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: **Wetland L (0.06 acres), Wetland P (0.42 acres), and Wetland Q (0.07 acres) are surrounded on all sides by upland vegetation and there is no evidence of surface water flow out of Wetlands L, P, and Q; therefore, these wetlands were found to be isolated, nonnavigable waters that have no substantial nexus to interstate or foreign commerce under 328.3(a)(i-iii).**

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: **Pick List**
   Drainage area: **Pick List**
   Average annual rainfall: inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☐ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **Pick List** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **Pick List** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: .
   Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain:
☐ Manipulated (man-altered). Explain:

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):
☐ Silts ☐ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/% cover:
☐ Other. Explain:

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain:
Presence of run/riffle/pool complexes. Explain:
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime:
Other information on duration and volume:

Surface flow is: **Pick List.** Characteristics:

Subsurface flow: **Pick List**. Explain findings:
☐ Dye (or other) test performed:

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):
☐ clear, natural line impressed on the bank ☐ the presence of litter and debris
☐ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☐ the presence of wrack line
☐ vegetation matted down, bent, or absent ☐ sediment sorting
☐ leaf litter disturbed or washed away ☐ scour
☐ sediment deposition ☐ multiple observed or predicted flow events
☐ water staining ☐ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain:

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☐ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain:
Identify specific pollutants, if known:

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Twelvemile Creek is depicted on the USGS NY Ransomville Quad as a solid blue named line. The creek, as it flows through the CWM property, is approximately 10-15 feet wide from bank to bank. The bed load consists of sand and silt. Twelvemile Creek is classified by the NYSDEC as a Class C unprotected stream. A review of aerial imagery indicates that there is water within the channel of Twelvemile Creek.
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters:

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Wetlands A, B, C, and D are continuous with a large forested wetland complex. This wetland is labeled on NWI mapped wetlands as PSS1/FO4Bd. It is located to the south, east and north of the CWM property. This large forested wetland directly abuts and is continuous with Twelvemile Creek.**

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

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[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☒ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:**Wetland L (0.06 acres), Wetland P (0.42 acres), and Wetland Q (0.07 acres) are surrounded on all sides by upland vegetation and there is no evidence of surface water flow out of Wetlands L, P, and Q; therefore, these wetlands were found to be isolated, nonnavigable waters that have no substantial nexus to interstate or foreign commerce under 328.3(a)(i-iii).**
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: EDR, Inc. June 2009.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☒ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute USGS NY Ransomville Quad.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: http://websoilsurvey.nrcs.usda.gov/app/.
☒ National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/Data/Mapper.html.
☒ State/Local wetland inventory map(s): http://www.dec.ny.gov/animals/38801.html.
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): Bing Maps Oblique Imagery (date unknown).
or ☒ Other (Name & Date):Ground-level photographs provided by the consultant (June 2009).
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD:
Wetlands L (0.06 acres), Wetland P (0.42 acres), and Wetland Q (0.07 acres) are outside Department of the Army jurisdiction as they do not meet the criteria for a jurisdictional water of the United States according to 33 CFR Part 328.3(a)(1-7) as follows:

1. does not/has not supported interstate or foreign commerce;

2. is not an interstate water/wetland;

3. the degradation or destruction of which would not affect interstate or foreign commerce and does not include such waters:

(i) which are or could be used by interstate or foreign travelers for recreational or other purposes; or
(ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
(iii) which are used or could be used for industrial purpose by industries in interstate commerce

4. is not an impoundment of water otherwise defined as WOUS under the definition;

5. is not a tributary of waters identified in paragraphs (a)(1)-(4) of this section;

6. is not a territorial sea;

7. is not wetland adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1)-(6) of this section;

8. is not prior converted cropland.

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): July 13, 2011

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB 2000-01534; CWM - Landfill Expansion. JD for Wetlands G and H. Form 2 of 6.

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: New York County/parish/borough: Niagara City: Model City
Center coordinates of site (lat/long in degree decimal format): Lat. 43.227° N, Long. -78.975° W.
Universal Transverse Mercator: 17
Name of nearest waterbody: Unnamed subtributary to Fourmile Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Ontario
Name of watershed or Hydrologic Unit Code (HUC): 04130001
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☒ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: July 13, 2011
☒ Field Determination. Date(s): November 17, 2010; April 29, 2011

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
   ☐ TNWs, including territorial seas
   ☐ Wetlands adjacent to TNWs
   ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
   ☐ Non-RPWs that flow directly or indirectly into TNWs
   ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   ☐ Impoundments of jurisdictional waters
   ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: linear feet: width (ft) and/or acres.
   Wetlands: Wetland G (0.41 acres), Wetland H (0.04 acres) for a total of 0.45 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
   Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: Oak Oarchard - Twelvemile: 1040 **square miles**
   Drainage area: Unknown **square miles**
   Average annual rainfall: 35-40 inches
   Average annual snowfall: 80-90 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **5-10** river miles from TNW.
   Project waters are **1-2** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: Wetland H (0.04 acres) is a depressional palustrine emergent wetland that overland sheet flows directly into Wetland G. Wetland G (0.41 acres) is a depressional palustrine emergent wetland that originates on-site. Wetland G sheet flows to the north, passes under a 15-foot wide gravel access road via a 12-inch diameter culvert.

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

After crossing under the gravel access road, the flows from this wetland enter a large forested wetland that directly abuts a seasonal RPW. This seasonal RPW is an unnamed subtributary to Fourmile Creek. The unnamed subtributary to Fourmile Creek flows northwest for approximately 4,000 lineal feet before it flows into a north flowing unnamed tributary to Fourmile Creek (perennial RPW). This tributary flows north for approximately 11,000 lineal feet (2.10 miles) before its confluence with Fourmile Creek. Fourmile Creek meanders north for approximately 2.53 river miles before it empties directly into Lake Ontario, a TNW. (See sheet 8 of 9 for flow route).
Tributary stream order, if known: As described in the Guidebook - First order.

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The unnamed subtributary and tributary to Fourmile Creek have been channelized and straightened to more efficiently convey surface water north to Fourmile Creek.

Tributary properties with respect to top of bank (estimate):
Average width: 10 feet
Average depth: 2-3 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):
☒ Silts ☒ Sands ☐ Concrete
☐ Cobbles ☒ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/% cover: Typha is present in portions of the channel
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: stable, vegetated banks.
Presence of run/riffle/pool complexes. Explain: None.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **11-20**
Describe flow regime: At the point where Wetland G flows into the culvert that subtends the gravel access road, no flow was observed during the November 2010 site visit. However, the manager of the property indicated that flow from Wetland G into the culvert occurs regularly during and after storm events, and in the spring snow-melt season. Flow is seasonal through this drainage.
Other information on duration and volume: .

Surface flow is: **Overland sheetflow.** Characteristics: Flow from Wetland G into the culvert is overland sheetflow. Flows enter a large forested complex that directly abuts an unnamed subtributary to Fourmile Creek.

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☒ OHWM[6] (check all indicators that apply):
☒ clear, natural line impressed on the bank ☐ the presence of litter and debris
☐ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☐ the presence of wrack line
☒ vegetation matted down, bent, or absent ☐ sediment sorting
☒ leaf litter disturbed or washed away ☐ scour
☒ sediment deposition ☒ multiple observed or predicted flow events
☐ water staining ☒ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☐ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: At the time of the November 2010 site visit, surface water within the wetland was clear. The project area is a chemical waste disposal facility. Chemical pollutants are likely introduced to the system as a result of on-site activities.

Identify specific pollutants, if known: Unknown.

(iv) Biological Characteristics. Channel supports (check all that apply):

☐ Riparian corridor. Characteristics (type, average width):

☒ Wetland fringe. Characteristics: Wetland G, a palustrine emergent wetland, flows into a forested wetland complex that directly abuts the unnamed subtributary to Fourmile Creek.

☐ Habitat for:

☐ Federally Listed species. Explain findings:

☐ Fish/spawn areas. Explain findings:

☐ Other environmentally-sensitive species. Explain findings:

☒ Aquatic/wildlife diversity. Explain findings: Amphibian egg masses were observed during the April 29, 2011 site visit.

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: Wetland H: 0.04 acres; Wetland G: 0.41 acres

Wetland type. Explain: Both wetland are palustrine emergent wetlands.

Wetland quality. Explain: Due to mowing activities, both wetlands are of low to moderate quality.

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: No flow into the culvert was observed at the November 2010, or April 2011 site visits; however, the property manager indicates that flow occurrs regularly during and after storm events, and during the spring snow-melt season. Evidence of recent flow was observed at the inlet of the culvert. Such evidence included sediment deposition and matted vegetation.

Surface flow is: **Overland sheetflow**

Characteristics: Wetland H overland sheetflows directly into Wetland G; therefore, these two wetlands are one wetland, hydrologically. Wetland G overland sheetflows into a culvert that empties into a large forested wetland complex that directly abuts an unnamed subtributary to Fourmile Creek.

Subsurface flow: **Unknown**. Explain findings:

☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: Wetland G flows northeast following a slight topographical gradient. Flow occurs during and after rain events, and during the spring snow-melt season. Overland sheetflow from Wetland G enters a culvert that subtends a 15 foot wide gravel access road. The culvert outlets directly into a large forested wetland complex that directly abuts an unnamed subtributary to Fourmile Creek.

☐ Ecological connection. Explain:

☐ Separated by berm/barrier. Explain:

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **500-year or greater** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Wetland H and G are palustrine emergent wetlands that are regularly mowed for maintenance purposes. These wetlands are located in a heavily developed and manipulated chemical waste disposal facility. Apart from the approximately 1,600 acre chemical waste facility, the watershed generally consists of forested land and agricultural land, with light residential developemnt.

Identify specific pollutants, if known: Specific pollutants are unknown, but likely contaminants are chemical wastes from the ongoing activities on site.

(iii) Biological Characteristics. Wetland supports (check all that apply):

☐ Riparian buffer. Characteristics (type, average width):

☒ Vegetation type/percent cover. Explain: 100% of wetland G and H are vegetated by emergent vegetation and shrub seedlings.

☐ Habitat for:

☐ Federally Listed species. Explain findings:

☐ Fish/spawn areas. Explain findings:

☐ Other environmentally-sensitive species. Explain findings: .
☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: 2
Approximately (0.45) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
Wetland H (Y)	0.04		
Wetland G (Y)	0.41		

Summarize overall biological, chemical and physical functions being performed: Wetlands H and G are small depressional emergent headwater wetlands that serve as the primary collector and processor of organic matter for downstream waters. The November 2010 site visit showed the wetland in a 50 percent inundated condition. The wetlands were functioning well to moderate downstream flows and likely have the capacitly to recharge local groundwater. Flood attenuation /runoff storage, pollutant trapping/water quality, removal of suspended solids, dissolved solids, toxins and treatment of nitrogen and phosphorus, functions are considered to be low to moderate. Wildlife habitat functions are considered to be low to moderate.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

RELEVANT REACH

The relevant reach for the significant nexus determination is from the headwaters of an unnamed subtributary to Fourmile Creek which originates onsite at Wetland H to the confluence with a perennial RPW that represents an unnamed subtributary to Fourmile Creek. As described in Section B, the unnamed subtributary consists mostly of a man-altered tributary that has been straightened and channelized to convey and treat surface water runoff from the chemical waste facility

SIGNIFICANT FACTORS

Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?

Yes, wetlands H and G serve as headwater wetlands that flow directly into a large forested complex that directly abuts an unnamed subtributary to Fourmile Creek. These headwater wetlands influence the capacity of the unnamed subtributary to Fourmile Creek to

to carry pollutants and flood waters to Lake Ontario based on proximity, flow, drainage area, and adjacent wetland characteristics as explained below.

Flow Characteristics:

Wetland H flows directly into Wetland G via overland sheetflow. Therefore, these two wetland areas are considered one wetland, hydrologically. Flow between Wetland H and Wetland G was observed during the November 2010 site visit. At Wetland G's single outlet, no flow into the culvert was noted during the November 2010 or April 2011 site visits. However, the property manager indicated that regular flow occurs during and after storm events and during the spring snow-melt season. When flow occurs, Wetland G outlets directly into a 12-inch corrugated metal pipe that subtends a 15 foot wide gravel access road. The culvert outlets directly into a large forested wetland complex that directly abuts the unnamed subtributary to Fourmile Creek. The distance from Wetland G to the large forested wetland complex is approximately 70 feet. The presence of saturated soils, sediment deposition, and matted vegetation at the inlet of the culvert indicate indicate at least a seasonal source of hydrology occurs at the inlet of the culvert.

Drainage:

Wetland H and G are located on a 1,600 acre, heavily developed, maintained, and hydrologically manipulated chemical waste disposal site. The remainder of the watershed is comprised of forested land with light residential development. Wetland H, G, and the unnamed subtributary to Fourmile Creek receive some runoff from the chemical waste facility. This runoff represents untreated inputs flowing directly into the perennial RPW that flows into Lake Ontario.

Wetlands:

Wetland H and G occurs entirely within the boundaries of the 1,600 acre site. Both wetlands area characterized as seasonally saturated palustrine emergent wetlands dominated by common reed and *Phalaris*. Wetland H sheet flows directly into Wetland G. Wetland G is adjacent to a forested wetland that directly abuts an unnamed subtributary (a perennial RPW) to Fourmile Creek. The unnamed subtributary then flows northwest into an unnamed tributary to Fourmile Creek. Functioning as headwater wetlands H and G serve as the primary collectors and processors of organic matter for downstream waters. The storage and transformation of organic matter is important because it prevents downstream water quality degradation as a result of excess organic matter. The November 2010 and April 2011 site visits showed the wetlands in a 50 percent inundated condition. The wetlands were functioning well to moderate downstream flows and have the capacity to recharge local groundwater. Flood attenuation /runoff storage, pollutant trapping/water quality, removal of suspended solids, dissolved solids, toxins and retention/treatment of nitrogen and phosphorus, functions are considered to be low to moderate for wetlands H and G. The water quality of receiving waters is strongly influenced by the quality of water coming from the headwater streams and wetlands that feed into them. Wildlife habitat functions are considered to be low.

Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?

Yes. Given the flow regime and close proximity to Lake Ontario, the unnamed subtributary and its wetlands, through their capacity to store, process, and transport food and nutrients, and their capacity to treat stormwater runoff, play an important cumulative role in improving water quality and providing habitat and lifecycle support functions for fish and other species present in Lake Ontario. In addition, an examination of the aerial photographs indicate there are no significant fish barriers between the headwaters of the unnamed subtributary and Lake Ontario. As a result it is likely that Lake Erie fish species would also be found within the unnamed perennial subtributary for which the adjacent wetlands drain directly into. These species would be there specifically for such activities such as feeding, nesting, and spawning. In summary, the unnamed tributary that directly abuts Wetland 1 flows directly into a perennial waterway that has the capacity to support fish species that also use Lake Ontario.

Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?

Yes, functioning as headwater wetlands, emergent wetlands serve as the primary collector and processor of organic matter and nutrients for downstream waters. The storage and transformation of organic matter is important to these types of systems because it prevents downstream water quality degradation as a result of excess organic matter. It also transforms unusable organic matter (inorganic carbon) into food for aquatic organisms (organic carbon). The November 2010 site visit showed the wetland in a 50 percent inundated condition. The wetlands were functioning well to moderate downstream flows preventing excess organic matter from reaching downstream waters. In addition, this system is also functioning to retain and process excess nutrients, such as nitrogen and phosphorus, transforming them into biologically useful forms that are slowly released to downstream waters.

CONCLUSION

Based upon the evaluation presented herein, there is a significant nexus between the adjacent Wetlands H and G Lake Ontario. Therefore, Wetland H and Wetland G are jurisdictional waters of the US.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:

☐ TNWs: linear feet width (ft), Or, acres.
☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: The subtributary has bed and banks. The subtributary is approximately 10 feet in width from bank to bank, and the bed load consists of sands and silts. A review of aerial photographs indicates that there is water within the channel of the unnamed subtributary. .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: **0.45** acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain: .
- ☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):

- ☐ Tributary waters: linear feet width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .
- ☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
- ☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
- ☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: EDR, Inc. JUne 2009.
- ☐ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☒ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☐ Corps navigable waters' study: .
- ☒ U.S. Geological Survey Hydrologic Atlas: .
  - ☐ USGS NHD data.
  - ☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute USGS NY Ransomville Quad.
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: http://websoilsurvey.nrcs.usda.gov/app/.
- ☒ National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/Data/Mapper.html.
- ☒ State/Local wetland inventory map(s): http://www.dec.ny.gov/animals/38801.html.
- ☐ FEMA/FIRM maps: .

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[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): Bing Maps Oblique Imagery (date unknown).
or ☒ Other (Name & Date): Ground-level photographs provided by the consultant (June 2009).
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: The above evaluation/determination was prepared by Kathleen Buckler, and represents a summary of the observations of the site conditions as documented during a November 17, 2010 site visit, and an April 29, 2011 site visit, and subsequent office evaluation of supporting data sources.

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): July 12, 2011

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB 2000-01534; CWM - Landfill Expansion; JD for Wetland I and K/KX. Form 3 of 6.

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: New York County/parish/borough: Niagara City: Model City
Center coordinates of site (lat/long in degree decimal format): Lat. 43.223° N, Long. -78.963° W.
Universal Transverse Mercator: 17
Name of nearest waterbody: Unnamed tributary to Fourmile Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Ontario
Name of watershed or Hydrologic Unit Code (HUC): 04130001
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: July 12, 2011
☒ Field Determination. Date(s): November 17, 2010; April 29, 2011

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
   ☐ TNWs, including territorial seas
   ☐ Wetlands adjacent to TNWs
   ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
   ☐ Non-RPWs that flow directly or indirectly into TNWs
   ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   ☐ Impoundments of jurisdictional waters
   ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: linear feet: width (ft) and/or acres.
   Wetlands: Wetland I: 0.10; Wetland K/KX: 0.60 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
   Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: **Pick List**
   Drainage area: **Pick List**
   Average annual rainfall: inches
   Average annual snowfall: inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☐ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **Pick List** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **Pick List** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: .
   Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):

Tributary is:
- ☐ Natural
- ☐ Artificial (man-made). Explain: .
- ☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List.**

Primary tributary substrate composition (check all that apply):
- ☐ Silts
- ☐ Sands
- ☐ Concrete
- ☐ Cobbles
- ☐ Gravel
- ☐ Muck
- ☐ Bedrock
- ☐ Vegetation. Type/% cover:
- ☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List.** Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
- ☐ Dye (or other) test performed: .

Tributary has (check all that apply):
- ☐ Bed and banks
- ☐ OHWM[6] (check all indicators that apply):
  - ☐ clear, natural line impressed on the bank
  - ☐ changes in the character of soil
  - ☐ shelving
  - ☐ vegetation matted down, bent, or absent
  - ☐ leaf litter disturbed or washed away
  - ☐ sediment deposition
  - ☐ water staining
  - ☐ other (list):
  - ☐ the presence of litter and debris
  - ☐ destruction of terrestrial vegetation
  - ☐ the presence of wrack line
  - ☐ sediment sorting
  - ☐ scour
  - ☐ multiple observed or predicted flow events
  - ☐ abrupt change in plant community
- ☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
- ☐ High Tide Line indicated by:
  - ☐ oil or scum line along shore objects
  - ☐ fine shell or debris deposits (foreshore)
  - ☐ physical markings/characteristics
  - ☐ tidal gauges
  - ☐ other (list):
- ☐ Mean High Water Mark indicated by:
  - ☐ survey to available datum;
  - ☐ physical markings;
  - ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: The tributary into which Wetland I flows is depicted on the Niagara County Soil Survey as a dashed line. The tributary averages 15 feet in width from bank to bank. Typha and bulrushes are present within the channel. At the time of the November 2010 and April 2011 site visits, there was steadily flowing water within the channel. The channel has well defined bed and banks, and the bed load consists of sands and silts.
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Wetland I and K/KX are linear wetlands. Wetland I flows south, through a culvert that subtends a gravel access road, and directly into the perennial RPW that flows into the unnamed tributary to Fourmile Creek. Wetland K/KX flows north/northwest directly into the perennial RPW that flows into the unnamed tributary to Fourmile Creek.**

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.

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[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: ERD, Inc. June 2009.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☒ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute USGS NY Ransomville Quad.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation: http://websoilsurvey.nrcs.usda.gov/app/.
☒ National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/Data/Mapper.html.
☒ State/Local wetland inventory map(s): http://www.dec.ny.gov/animals/38801.html.
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date): Bing Maps Oblique Imagery (date unknown).
or ☒ Other (Name & Date): Groune-level photographs provided by the consultant (June 2009).
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: The above evaluation/determination was prepared by Kathleen Buckler, and represents a summary of the observations of the site conditions as documented during a November 17, 2010 site visit, and an April 29, 2011 site visit, and subsequent office evaluation of supporting data sources.

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): July 12, 2011

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB 2000-01534; CWM - Landfill Expansion; JD for Wetland M. Form 4 of 6.

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: New York County/parish/borough: Niagara City: Model City
Center coordinates of site (lat/long in degree decimal format): Lat. 43.223° N, Long. -78.963° W.
Universal Transverse Mercator: 17
Name of nearest waterbody: Unnamed tributary to Fourmile Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Ontario
Name of watershed or Hydrologic Unit Code (HUC): 04130001
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: July 13, 2011
☒ Field Determination. Date(s): November 17, 2010 and April 29, 2011

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
   ☐ TNWs, including territorial seas
   ☐ Wetlands adjacent to TNWs
   ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
   ☐ Non-RPWs that flow directly or indirectly into TNWs
   ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   ☒ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   ☐ Impoundments of jurisdictional waters
   ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: linear feet: width (ft) and/or acres.
   Wetlands: 0.54 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
   Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: Oak Orchard - Twelvemile: 1040 **square miles**
   Drainage area: Unknown **square miles**
   Average annual rainfall: 35-40 inches
   Average annual snowfall: 85-90 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: Wetland M originates on site as a palustrine forested wetland, flows west on a topographical gradient, crosses a culvert, and enters a drainage channel that flows to the north. The drainage channel is a seasonal RPW that flows north for 768 linear feet before flowing into an unnamed subtributary to Fourmile Creek. The

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

unnamed subtributary to Fourmile Creek is a perennial RPW and flows west for approximately 2,300 linear feet before flowing into an unnamed tributary to Fourmile Creek (another perennial RPW). This unnamed tributary flows north and then northwest for 2.39 stream miles before it empties into Fourmile Creek. Fourmile Creek meanders north for approximately 2.45 miles before it empties directly into Lake Ontario (a TNW).
Tributary stream order, if known: As described in the Guidebook, First.

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The seasonal RPW into which Wetland M drains has been straightened and channelized for the purposes of managing the flows of the on-site water.

Tributary properties with respect to top of bank (estimate):
Average width: 5-8 feet
Average depth: 1-2 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):
☒ Silts ☒ Sands ☐ Concrete
☐ Cobbles ☒ Gravel ☐ Muck
☐ Bedrock ☒ Vegetation. Type/% cover: Typha is present in the channel
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The tributary is stable due to low gradient.
Presence of run/riffle/pool complexes. Explain: None.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **11-20**
Describe flow regime: At the time of the November 2010 and April 2011 site visits, shallow, steadily flowing water was observed in the drainage channel. Flow within the channel is continuous to the point where it flows into the unnamed subtributary (perennial RPW).
Other information on duration and volume: A review of aerial photographs indicates that there is water in the drainage channel along its entire length until the confluence with the perennial RPW.

Surface flow is: **Confined.** Characteristics: The flow is confined to a straightened and channelized drainage channel.

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):
☒ clear, natural line impressed on the bank ☒ the presence of litter and debris
☒ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☐ the presence of wrack line
☒ vegetation matted down, bent, or absent ☐ sediment sorting
☐ leaf litter disturbed or washed away ☐ scour
☒ sediment deposition ☒ multiple observed or predicted flow events
☐ water staining ☐ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☐ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: At the time of the November 2010 and April 2011 site visits, water within the channel was clear. The project area is a chemical waste disposal facility. Chemical pollutants are likely introduced to the system as a result of on-site activities.

Identify specific pollutants, if known: Unknown.

(iv) Biological Characteristics. Channel supports (check all that apply):

☐ Riparian corridor. Characteristics (type, average width):

☒ Wetland fringe. Characteristics: The banks of the channel have wetland hydrology, hydrophytic vegetation, and hydric soils; therefore, the edges of the channel support a wetland fringe.

☐ Habitat for:

☐ Federally Listed species. Explain findings:

☐ Fish/spawn areas. Explain findings:

☐ Other environmentally-sensitive species. Explain findings:

☒ Aquatic/wildlife diversity. Explain findings: At the time of the April 29, 2011 site visit, amphibian egg masses were observed in the channel.

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: 0.54 acres

Wetland type. Explain: palustrine emergent/forested.

Wetland quality. Explain: Wetland M is both a linear wetland, that has been channelized and straightened, and a forested floodplain wetland. The forested portion of wetland is of moderate to high quality, as is vegetated with typical northern hardwood forest species .

Project wetlands cross or serve as state boundaries. Explain:

(b) General Flow Relationship with Non-TNW:

Flow is: **Ephemeral flow**. Explain: A culvert structure was installed at the outlet of Wetland M in 2009. This structure severs the normal low flow of Wetland M into the adjacent drainage channel. During storm events and the spring snow-melt season, however, flow regularly occurs between Wetland M and the adjacent drainage channel.

Surface flow is: **Confined**

Characteristics: Wetland M originates on the subject parcel and flows to the west along a topographical gradient. The westernmost end of Wetland M has been channelized, and resembles a linear, vegeated ditch; therefore, flows within Wetland M are confined at the westernmost end of the wetland.

Subsurface flow: **Unknown**. Explain findings:

☐ Dye (or other) test performed:

(c) Wetland Adjacency Determination with Non-TNW:

☐ Directly abutting

☒ Not directly abutting

☒ Discrete wetland hydrologic connection. Explain: Although no flow was observed at the time of the November 2010 site visit or the April 2011 site visit, the property manager indicated that flow from wetland M into a drainage feature occurs regularly during storm events and during the spring snow-melt season.

☐ Ecological connection. Explain:

☒ Separated by berm/barrier. Explain: A three-way culvert structure was installed in 2009. This structure severs the hydrology from Wetland M into the drainage ditch located on the western side of a gravel access road. The normal flows have been severed; however, regular high flows are able to enter the drainage feature that flows to the north, and eventually off-site.

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **500-year or greater** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: At the time of the November 2010 and April 2011 site visits, water within the wetland was clear.

Identify specific pollutants, if known: Specific pollutants are unknown; however, likely contaminants are chemical wastes from the ongoing on-site activities .

(iii) Biological Characteristics. Wetland supports (check all that apply):

☐ Riparian buffer. Characteristics (type, average width):

☒ Vegetation type/percent cover. Explain: Wetland M is characterized as both palustrine emergent and palustrine forested. This wetland contains emergent vegetation and northern hardwood forest vegetation.

☐ Habitat for:

☐ Federally Listed species. Explain findings:

☐ Fish/spawn areas. Explain findings:

☐ Other environmentally-sensitive species. Explain findings: .
☒ Aquatic/wildlife diversity. Explain findings: At the time of the April 29, 2011 site visit, amphibian egg masses were observed in the wetland.

3. **Characteristics of all wetlands adjacent to the tributary (if any)**
All wetland(s) being considered in the cumulative analysis: 1
Approximately (0.54) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
Wetland M (N)	0.54		

Summarize overall biological, chemical and physical functions being performed: This headwater wetland serves as the primary collector and processor of organic matter for downstream waters. The November 2010 and April 2011 sitevisits showed the wetland in a 50 percent inundated condition, slowly releasing water to its three primary drainages. The wetland was functioning well to moderate downstream flows and likely has the capacitly to recharge local groundwater. Flood attenuation /runoff storage, pollutant trapping/water quality, removal of suspended solids, dissolved solids, toxins and treatment of nitrogen and phosphorus, functions are considered to be low to moderate. Wildlife habitat functions are considered to be low to moderate.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

RELEVANT REACH

The relevant reach for the significant nexus determination is from the headwaters of an unnamed tributary which originates onsite at Wetland M to the confluence with a perennial RPW that represents an unnamed tributary to Fourmile Creek. As described in Section B2, Wetland M is a palustrine emergent and forested wetland that flows to the west on a topographical gradient. In 2009, a culvert structure was installed at the outlet of Wetland M, which prevented the normal low flows of Wetland M from flowing to the west, into a drainage feature, and eventually off-site. This structure prevents low flows from leaving the site; however, high flows regularly overtop the culvert structure during and after storm events, and during the spring snow-melt season.

SIGNIFICANT FACTORS

Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?

Yes. During regular high flows, Wetland M overtops a culvert structure, flows into a drainage channel, and eventually flows off-site, and into an unnamed tributary to Fourmile Creek. The distance from the outlet of Wetland M and the unnamed tributary to Fourmile Creek is approximately 3,200 lineal feet. The unnamed tributary to Fourmile Creek is in close proximity to a TNW, with Lake Ontario occurring approximately 1.0 mile from where the drainage channel flows into the unnamed tributary. Wetland M was found to influence the capacity of the unnamed tributary to Fourmile Creek to carry pollutants or flood waters to Lake Ontario based on proximity, flow, drainage area, and adjacent wetland characteristics as explained below

Flow Characteristics:

No flow between Wetland M and the adjacent drainage channel was observed during the November 2010 or April 2011 site visits. However, the property manager indicated that flow occurs regularly during storm events and during the spring snow-melt period. These ephemeral flows overtop the culvert structure that was installed in 2009. Prior to this installation, Wetland M flowed directly into the drainage ditch, and eventually off-site. The drainage ditch into which Wetland M flows is characterized as a seasonal RPW. At the time of both site visits, there was steadily flowing water within the tributary to the confluence with the unnamed subtributary to Fourmile Creek. The tributary's seasonal flow contributes a significant amount of water into the unnamed perennial RPW just 2.0 miles upstream from Lake Ontario.

Drainage:

The seasonal RPW drainage channel drains a portion of a 1,600-acre chemical waste disposal facility. The tributary receives portion of the runoff associated with a large chemical waste landfill. Wetland M represents one of many surface water inputs. These surface water inputs represent waters that will eventually reach Lake Ontario.

Wetlands:

Wetland M occurs entirely within the boundaries of the site. The 0.54 acre wetland is characterized as a seasonally saturated palustrine forested wetland dominated with mid-successional to mature red maple (Acer rubrum) and green ash (Fraxinus pensylvanica). Wetland M is adjacent to a seasonal RPW drainage channel that flows into an unnamed subtributary to Fourmile Creek. Functioning as a headwater wetland, the wetland serves as the primary collector and processor of organic matter for downstream waters. The storage and transformation of organic matter is important because it prevents downstream water quality degradation as a result of excess organic matter. The November 2010 site visit showed the wetland in a 50 percent inundated condition. The wetland was functioning well to moderate downstream flows and has the capacity to recharge local groundwater. Flood attenuation /runoff storage, pollutant trapping/water quality, removal of suspended solids, dissolved solids, toxins and retention/treatment of nitrogen and phosphorus, functions are considered to be low to moderate for Wetland M. The water quality of receiving waters is strongly influenced by the quality of water coming from the headwater streams and wetlands that feed into them. Wildlife habitat functions are considered to be low.

Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?

Yes. The unnamed seasonal tributary flows directly into a perennial RPW about four (4) stream miles upstream from where it flows directly into Lake Ontario. Given the flow regime and close proximity to Lake Ontario, the unnamed tributary and its wetland through their capacity to store, process, and transport food and nutrients and their capacity to treat stormwater runoff play an important cumulative role in improving water quality and providing habitat and lifecycle support functions for fish and other species present in Lake Ontario. In addition, an examination of the aerial photographs indicate there are no significant fish barriers between the confluence of the unnamed tributary and Lake Ontario. As a result it is likely that Lake Erie fish species would also be found within the perennial tributary for which the unnamed tributary and its adjacent wetlands drain directly into. These species would be there specifically for such activities such as feeding, nesting, and spawning. In summary, the unnamed tributary that directly abuts Wetland 1 flows directly into a perennial waterway that has the capacity to support fish species that also utilize Lake Ontario

Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?

Yes, functioning as a headwater wetland, the 0.54-acre forested wetland serves as the primary collector and processor of organic matter and nutrients for downstream waters. The storage and transformation of organic matter is important to these types of systems because it prevents downstream water quality degradation as a result of excess organic matter. It also transforms unusable organic matter (inorganic carbon) into food for aquatic organisms (organic carbon). TheNovember 2010 and April 2011 site visit showed the wetland in a 50 percent inundated condition. The wetland was functioning well to moderate downstream flows preventing excess organic matter from reaching downstream waters. In addition, this system is also functioning to retain and process excess nutrients, such as nitrogen and phosphorus, transforming them into biologically useful forms that are slowly released to downstream waters.

CONCLUSION

Based upon the evaluation presented herein, there is a significant nexus between Wetland M and Lake Ontario. Therefore, the reach of Wetland M and the unnamed seasonal drainage channel are jurisdictional waters of the US.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: The tributary into which Wetland M flows is approximately 5 feet in width from bank to bank, and the bed load consists of sands and silts. At the time of the November 2010 and April 2011 site visits, there was slowly flowing water within the channel. The tributary contains bed and banks.

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   - ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☒ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: **0.54** acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   - ☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   - ☐ Demonstrate that impoundment was created from "waters of the U.S.," or

[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: EDR, Inc. June 2009.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☒ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name:7.5 Minute USGS NY Ransomville Quad.

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[10] Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.*

- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: http://websoilsurvey.nrcs.usda.gov/app/.
- ☒ National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/Data/Mapper.html.
- ☒ State/Local wetland inventory map(s):http://www.dec.ny.gov/animals/38801.html.
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date):Bing Maps Oblique Imagery (date unknown).
  or ☒ Other (Name & Date): Ground-level photographs provided by the consultant (June 2009).
- ☐ Previous determination(s). File no. and date of response letter: .
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: The above evaluation/determination was prepared by Kathleen Buckler, and represents a summary of the observations of the site conditions as documented during a November 17, 2010 site visit, and an April 29, 2011 site visit, and subsequent office evaluation of supporting data sources.

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): July 13, 2011

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB 2000-01534; CWM - Landfill Expansion. JD for Wetland J. Form 5 of 6.

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: New York County/parish/borough: Niagara City: Model City
Center coordinates of site (lat/long in degree decimal format): Lat. 43.223° **N**, Long. -78.963° **W**.
Universal Transverse Mercator: 17
Name of nearest waterbody: Unnamed tributary to Fourmile Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Ontario
Name of watershed or Hydrologic Unit Code (HUC): 04130001
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: July 13, 2011
☒ Field Determination. Date(s): November 17, 2010 and April 29, 2011

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
   ☐ TNWs, including territorial seas
   ☐ Wetlands adjacent to TNWs
   ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
   ☐ Non-RPWs that flow directly or indirectly into TNWs
   ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
   ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
   ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
   ☐ Impoundments of jurisdictional waters
   ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
   Non-wetland waters: linear feet: width (ft) and/or acres.
   Wetlands: 0.92 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
   Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) **General Area Conditions:**
   Watershed size: **Pick List**
   Drainage area: **Pick List**
   Average annual rainfall: inches
   Average annual snowfall: inches

   (ii) **Physical Characteristics:**
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☐ Tributary flows through **Pick List** tributaries before entering TNW.

   Project waters are **Pick List** river miles from TNW.
   Project waters are **Pick List** river miles from RPW.
   Project waters are **Pick List** aerial (straight) miles from TNW.
   Project waters are **Pick List** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: .
   Tributary stream order, if known: .

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☐ Manipulated (man-altered). Explain: .

Tributary properties with respect to top of bank (estimate):
Average width: feet
Average depth: feet
Average side slopes: **Pick List**.

Primary tributary substrate composition (check all that apply):
☐ Silts ☐ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☐ Vegetation. Type/% cover:
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: .
Tributary geometry: **Pick List**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: .

Surface flow is: **Pick List**. Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☐ OHWM[6] (check all indicators that apply):
☐ clear, natural line impressed on the bank ☐ the presence of litter and debris
☐ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☐ the presence of wrack line
☐ vegetation matted down, bent, or absent ☐ sediment sorting
☐ leaf litter disturbed or washed away ☐ scour
☐ sediment deposition ☐ multiple observed or predicted flow events
☐ water staining ☐ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☐ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges
☐ other (list):

(iii) Chemical Characteristics:
Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).
Explain: .
Identify specific pollutants, if known: .

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☐ Wetland fringe. Characteristics: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: acres

Wetland type. Explain: .

Wetland quality. Explain: .

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Pick List**. Explain: .

Surface flow is: **Pick List**

Characteristics: .

Subsurface flow: **Pick List**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☐ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **Pick List** river miles from TNW.

Project waters are **Pick List** aerial (straight) miles from TNW.

Flow is from: **Pick List.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: .

Identify specific pollutants, if known: .

(iii) Biological Characteristics. Wetland supports (check all that apply):

- ☐ Riparian buffer. Characteristics (type, average width): .
- ☐ Vegetation type/percent cover. Explain: .
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **Pick List**

Approximately ( ) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed: .

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☒ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: The unnamed subtributary to Fourmile Creek is depicted on the USGS NY Ransomville Quad map as a solid blue, unnamed line. The channel has well defined bed and banks, and the tributary is 10-15 feet in width from bank to bank. The bed load consists of sands, silts, and small cobbles.
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Wetland J is (0.92 acres) is comprised of two different wetland communities. The two wetlands are connected by a culvert passing underneath a road. The western palustrine forested portion of Wetland J flows east, into the eastern palustrine emergent portion of Wetland J. The emergent part of Wetland J is a linear wetland/drainage channel thea flows from the south to the north, through a series of culverts, and eventually into a large detention pond located at the northern property boundary. This detention pond outlets directly into the unnamed perennial subtributary to Fourmile Creek . See sheet 6 of 9 for the flow route.**

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.

[8]See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: EDR, Inc. June 2009.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☒ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: .
☐ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute USGS NY Ransomville Quad.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation:http://websoilsurvey.nrcs.usda.gov/app/ .
☒ National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/Data/Mapper.html.
☒ State/Local wetland inventory map(s): http://www.dec.ny.gov/animals/38801.html .
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):Bing Maps Oblique Imagery (date unknown).
or ☒ Other (Name & Date):Ground-level photographs provided by the consultant (June 2009).
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: The above evaluation/determination was prepared by Kathleen Buckler, and represents a summary of the observations of the site conditions as documented during a November 17, 2010 site visit, and an April 29, 2011 site visit, and subsequent office evaluation of supporting data sources.

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): July 13, 2011

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: LRB 2000-01534; CWM - Landfill Expansion; JD for Wetland N and O. Form 6 of 6.

C. PROJECT LOCATION AND BACKGROUND INFORMATION:

State: New York County/parish/borough: Niagara City: Model City
Center coordinates of site (lat/long in degree decimal format): Lat. 43.223° N, Long. -78.963° W.
Universal Transverse Mercator: 17
Name of nearest waterbody: Unnamed tributray to Fourmile Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lake Ontario
Name of watershed or Hydrologic Unit Code (HUC): 04130001

☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: July 13, 2011
☒ Field Determination. Date(s): November 17, 2010 and April 29, 2011

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]

☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or acres.
      Wetlands: Wetland N: 0.04 acres; Wetland O: 0.06 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) **General Area Conditions:**
   Watershed size: Oak Orchard - Twelvemile: 1040 **square miles**
   Drainage area: Unknown **square miles**
   Average annual rainfall: 35-40 inches
   Average annual snowfall: 80-90 inches

   (ii) **Physical Characteristics:**
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **2-5** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** aerial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: .

   Identify flow route to TNW[5]: Wetland N flows north, directly into Wetland O. Wetland O flows south, takes a left turn, and flows west where it enters a seasonal RPW that has been channelized and straightened to convey water to the west, and off site. The flow enters a culvert and crosses an access road, and continues to flow west for approximately 600 linear

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

feet before it is culverted for approximately 870 linear feet to subtend a landfill cell. Upon exiting the culvert, the channel is characterized as a perennial RPW that flows west for 1, 340 linear feet before it flows into the unnamed tributary to Fourmile Creek. The unnamed tributary to Fourmile Creek flows north and then northwest for 2.68 river miles before its confluence with Fourmile Creek. Fourmile Creek meanders north for 2.53 miles before flowing directly into Lake Ontario (a TNW).
Tributary stream order, if known: As described in the guidebook, first.

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The on-site channel has been straightened and channelized to convey surface water off-site.

Tributary properties with respect to top of bank (estimate):
Average width: 5-8 feet
Average depth: 1-2 feet
Average side slopes: **2:1.**

Primary tributary substrate composition (check all that apply):
☒ Silts ☒ Sands ☐ Concrete
☐ Cobbles ☐ Gravel ☐ Muck
☐ Bedrock ☒ Vegetation. Type/% cover: Typha occurs within the channel
☐ Other. Explain: .

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The channel is stable.
Presence of run/riffle/pool complexes. Explain: None.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): %

(c) Flow:
Tributary provides for: **Seasonal flow**
Estimate average number of flow events in review area/year: **11-20**
Describe flow regime: At the time of the Novemer 2010 site visit, steady flow was observed from wetland O into the culvert that subtends the landfill cell.
Other information on duration and volume: Hydrophytic vegetation is located within the channel,which suggests a constant or at least seasonal source of hydrology occurs within the channel.

Surface flow is: **Confined.** Characteristics: Approximately 50 percent of the seasonal RPW is confined to surface drainage channels. The remaining 50 percent is confined to an underground water conveyance.

Subsurface flow: **Yes.** Explain findings: The flow from wetland O is culverted for approximately 800 linear feet.
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☐ Bed and banks
☒ OHWM[6] (check all indicators that apply):
☒ clear, natural line impressed on the bank ☐ the presence of litter and debris
☒ changes in the character of soil ☐ destruction of terrestrial vegetation
☐ shelving ☐ the presence of wrack line
☒ vegetation matted down, bent, or absent ☐ sediment sorting
☐ leaf litter disturbed or washed away ☐ scour
☒ sediment deposition ☒ multiple observed or predicted flow events
☒ water staining ☒ abrupt change in plant community
☐ other (list):
☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):
☐ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:
☐ oil or scum line along shore objects ☐ survey to available datum;
☐ fine shell or debris deposits (foreshore) ☐ physical markings;
☐ physical markings/characteristics ☐ vegetation lines/changes in vegetation types.
☐ tidal gauges

[6]A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.
[7]Ibid.

☐ other (list):

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: At the time of the November 2010 site visit, surface water within the wetland was clear. The project area is a chemical waste disposal facility. Chemical pollutants are likely introduced to the system as a result of on-site activities.

Identify specific pollutants, if known: .

(iv) Biological Characteristics. Channel supports (check all that apply):

- ☐ Riparian corridor. Characteristics (type, average width): .
- ☒ Wetland fringe. Characteristics: Wetland O is located at the headwaters of the seasonal drainage channel.
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: Wetland N: 0.04 acres; Wetland O: 0.06 acres for a total of 0.10 acres

Wetland type. Explain: Wetland N is palustrine emergent and Wetland O is palustrine forested.

Wetland quality. Explain: Both Wetland N and O are of moderate quality.

Project wetlands cross or serve as state boundaries. Explain: .

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: Wetland N flows directly into Wetland O. Wetland O is continuous with and directly abuts the seasonal RPW.

Surface flow is: **Confined**

Characteristics: Wetland N flows directly into Wetland O via a man-made linear drainage feature. Wetland O flows directly into, and occurs along the banks of the seasonal RPW.

Subsurface flow: **Unknown**. Explain findings: .

- ☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

- ☒ Directly abutting
- ☐ Not directly abutting
  - ☐ Discrete wetland hydrologic connection. Explain: .
  - ☐ Ecological connection. Explain: .
  - ☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **2-5** river miles from TNW.

Project waters are **2-5** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **500-year or greater** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: Wetland N and O are palustrine emergent and palustrine forested wetlands that are located in a heavily developed and manipulated chemical waste disposal facility. Apart from the approximately 1,600 acre chemical waste facility, the watershed generally consists of forested land and agricultural land, with light residential developemnt.

Identify specific pollutants, if known: Specific pollutants are unknown, but likely contaminants are chemical wastes from the ongoing activities on site.

(iii) Biological Characteristics. Wetland supports (check all that apply):

☒ Riparian buffer. Characteristics (type, average width): Wetland O occurs along the banks of the seasonal RPW. Wetland O is located in a 1.35-acre forested block.

- ☒ Vegetation type/percent cover. Explain: Wetland O contains typical northern hardwood forest species.
- ☐ Habitat for:
  - ☐ Federally Listed species. Explain findings: .
  - ☐ Fish/spawn areas. Explain findings: .
  - ☐ Other environmentally-sensitive species. Explain findings: .
  - ☐ Aquatic/wildlife diversity. Explain findings: .

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: **2**

Approximately (0.10) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
Wetland N (Y)	0.04		
Wetland O (Y)	0.06		

Summarize overall biological, chemical and physical functions being performed: Wetlands N and O are small depressional emergent headwater wetlands that serve as the primary collector and processor of organic matter for downstream waters. The November 2010 site visit showed the wetland in a 50 percent inundated condition. The wetlands were functioning well to moderate downstream flows and likely have the capacitly to recharge local groundwater. Flood attenuation /runoff storage, pollutant trapping/water quality, removal of suspended solids, dissolved solids, toxins and treatment of nitrogen and phosphorus, functions are considered to be low to moderate. Wildlife habitat functions are considered to be low to moderate.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

3. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .

☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: **Wetland N flows directly into Wetland O. Wetland O abuts and is directly continuous with the seasonal drainage channel that flows into the unnamed tributray to Fourmile Creek.**

☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
☐ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional wetlands in the review area: acres.

7. **Impoundments of jurisdictional waters.[9]**
As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
☐ Demonstrate that impoundment was created from "waters of the U.S.," or
☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]
☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.

---

[8] See Footnote # 3.
[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):
☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

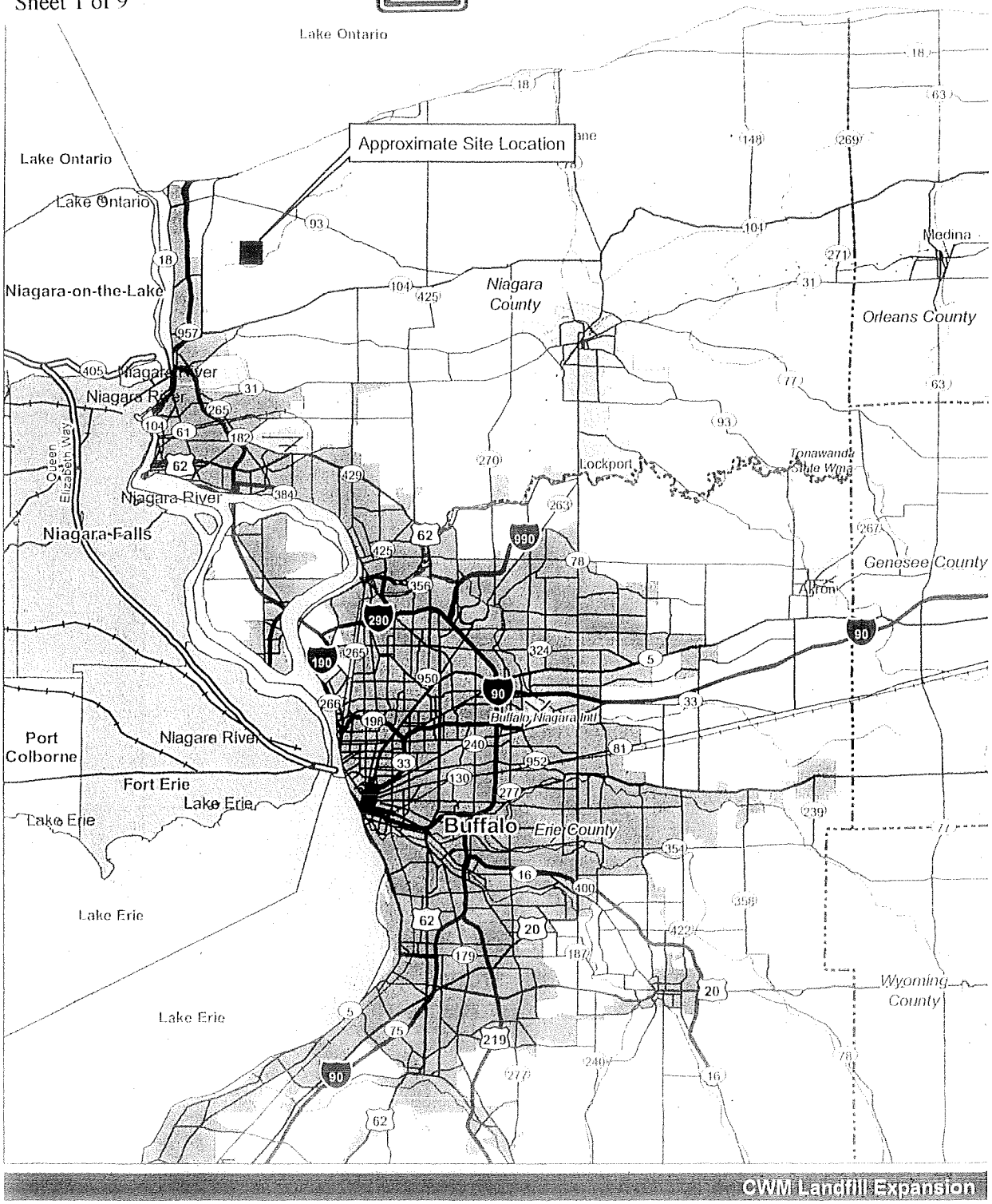
Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

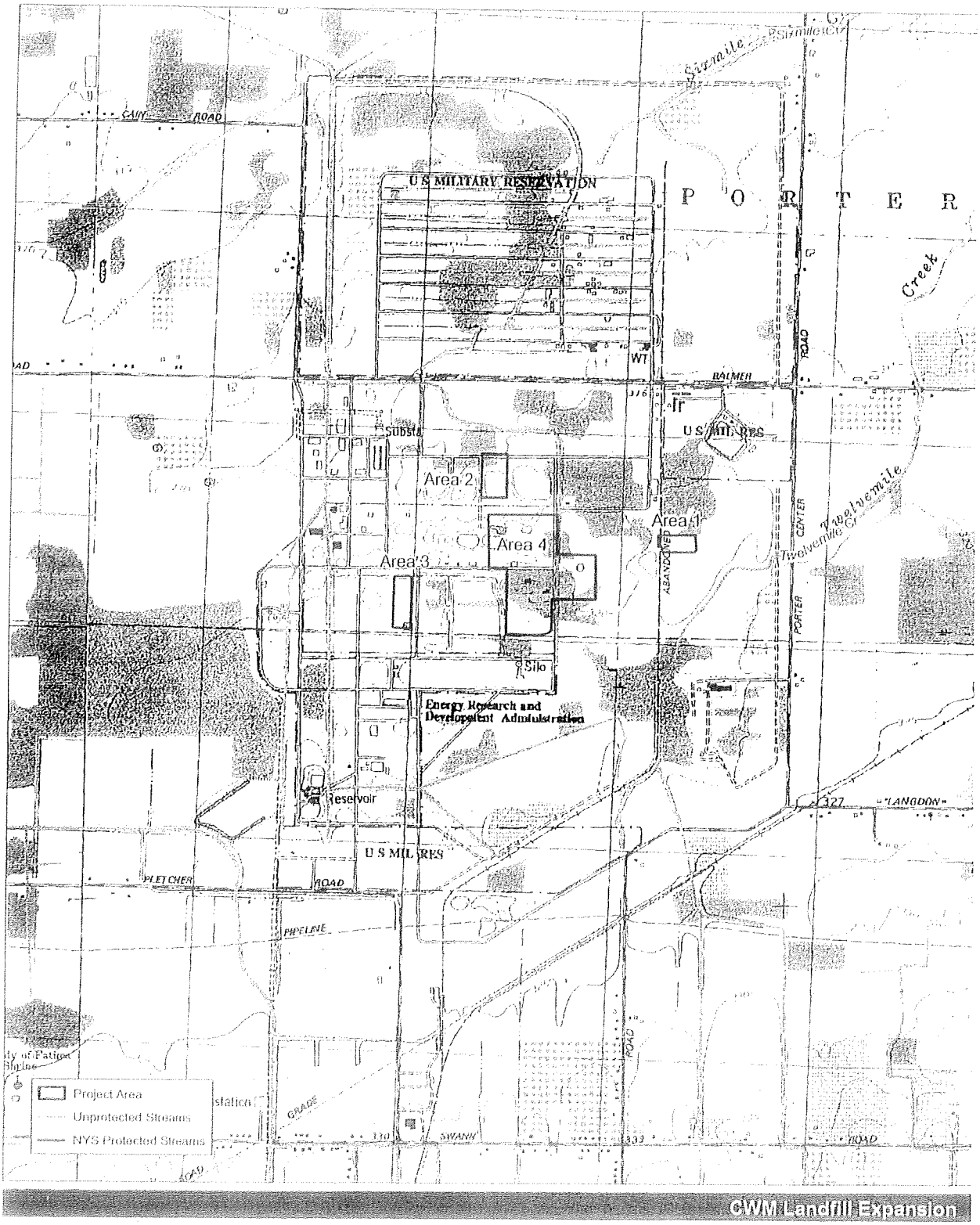
A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):
☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: EDR, Inc. June 2009.
☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
☒ Office concurs with data sheets/delineation report.
☐ Office does not concur with data sheets/delineation report.
☐ Data sheets prepared by the Corps: .
☐ Corps navigable waters' study: .
☒ U.S. Geological Survey Hydrologic Atlas: .
☒ USGS NHD data.
☒ USGS 8 and 12 digit HUC maps.
☒ U.S. Geological Survey map(s). Cite scale & quad name: 7.5 Minute USGS NY Ransomville Quad.
☒ USDA Natural Resources Conservation Service Soil Survey. Citation:http://websoilsurvey.nrcs.usda.gov/app/.
☒ National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/Data/Mapper.html.
☒ State/Local wetland inventory map(s): http://www.dec.ny.gov/animals/38801.html.
☐ FEMA/FIRM maps: .
☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
☒ Photographs: ☒ Aerial (Name & Date):Bing Maps Oblique Imagery (date unknown).
or ☒ Other (Name & Date): Ground-level photographs provided by the consultant (June 2009).
☐ Previous determination(s). File no. and date of response letter: .
☐ Applicable/supporting case law: .
☐ Applicable/supporting scientific literature: .
☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: The above evaluation/determination was prepared by Kathleen Buckler, and represents a summary of the observations of the site conditions as documented during a November 17, 2010 site visit, and an April 29, 2011 site visit, and subsequent office evaluation of supporting data sources. Wetland N flows directly into Wetland O. Wetland O is continuous with, and directly abuts a seasonal RPW that flows into an unnamed tributary (perennial RPW) to Fourmile Creek. A significant nexus exists between Wetland N, Wetland O, and the seasonal RPW .

CWM
D/A Processing No. 2000-01534
Niagara County, New York
Quad: Ransomville
Sheet 1 of 9



CWM Landfill Expansion
Town of Porter - Niagara County, New York
Wetland Delineation Report
Figure 1: Regional Project Location



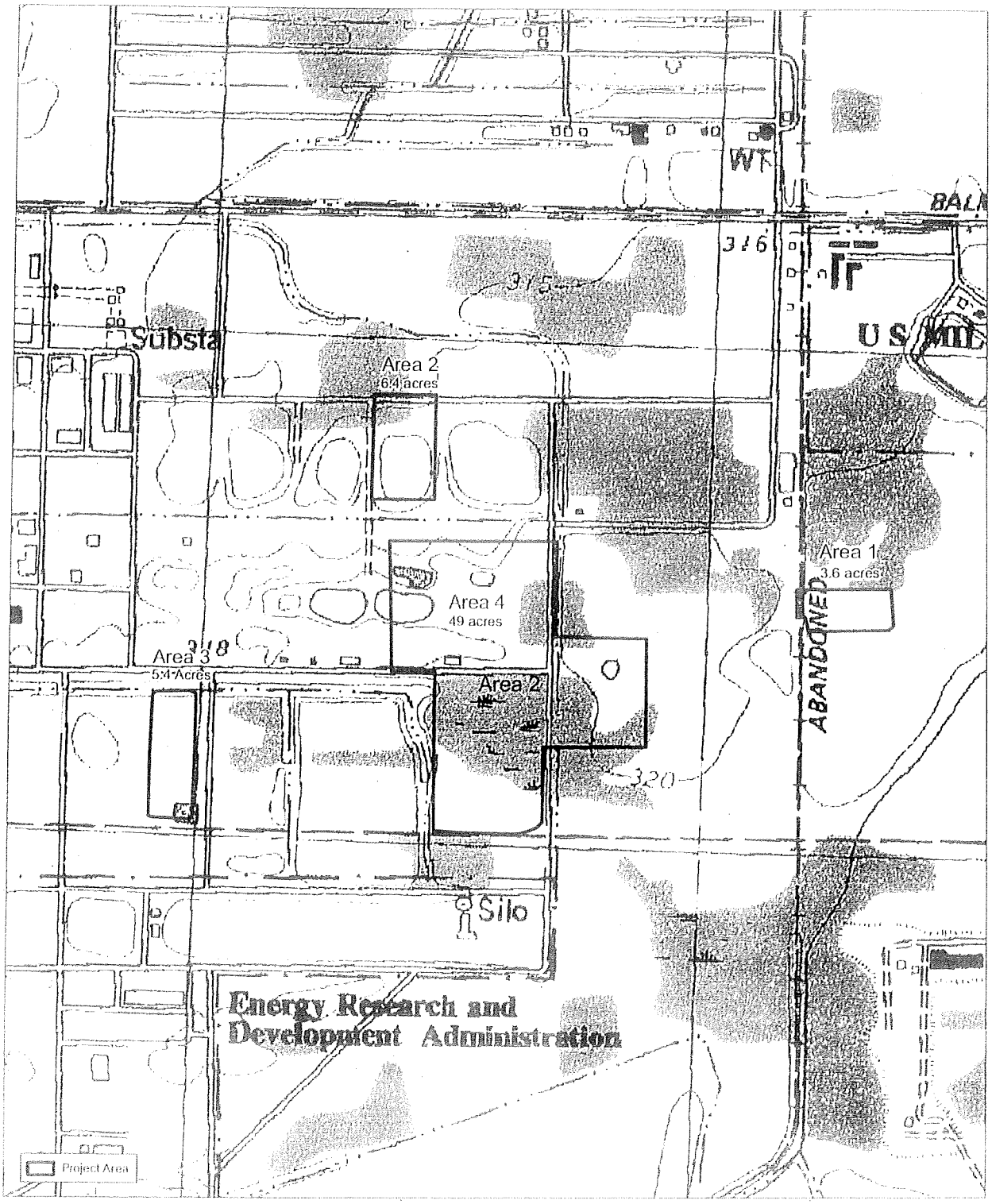
CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 7: Surface Waters

CWM
D/A Processing No. 2000-01534
Niagara County, New York
Quad: Ransomville
Sheet 2 of 9



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 2: Project Area

CWM
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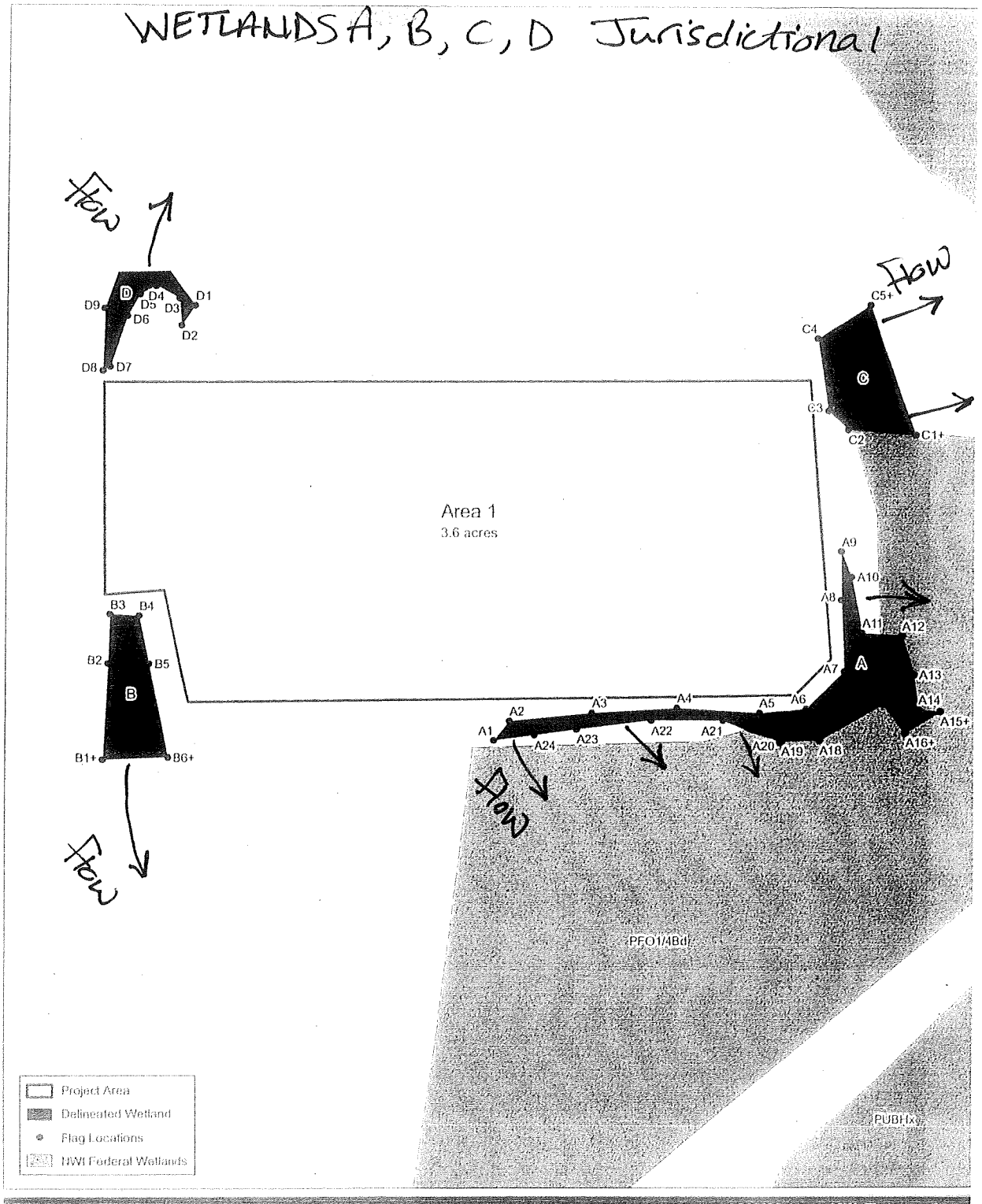
Niagara County, New York
Quad: Ransomville
Sheet 3 of 9



CWM Landfill Expansion

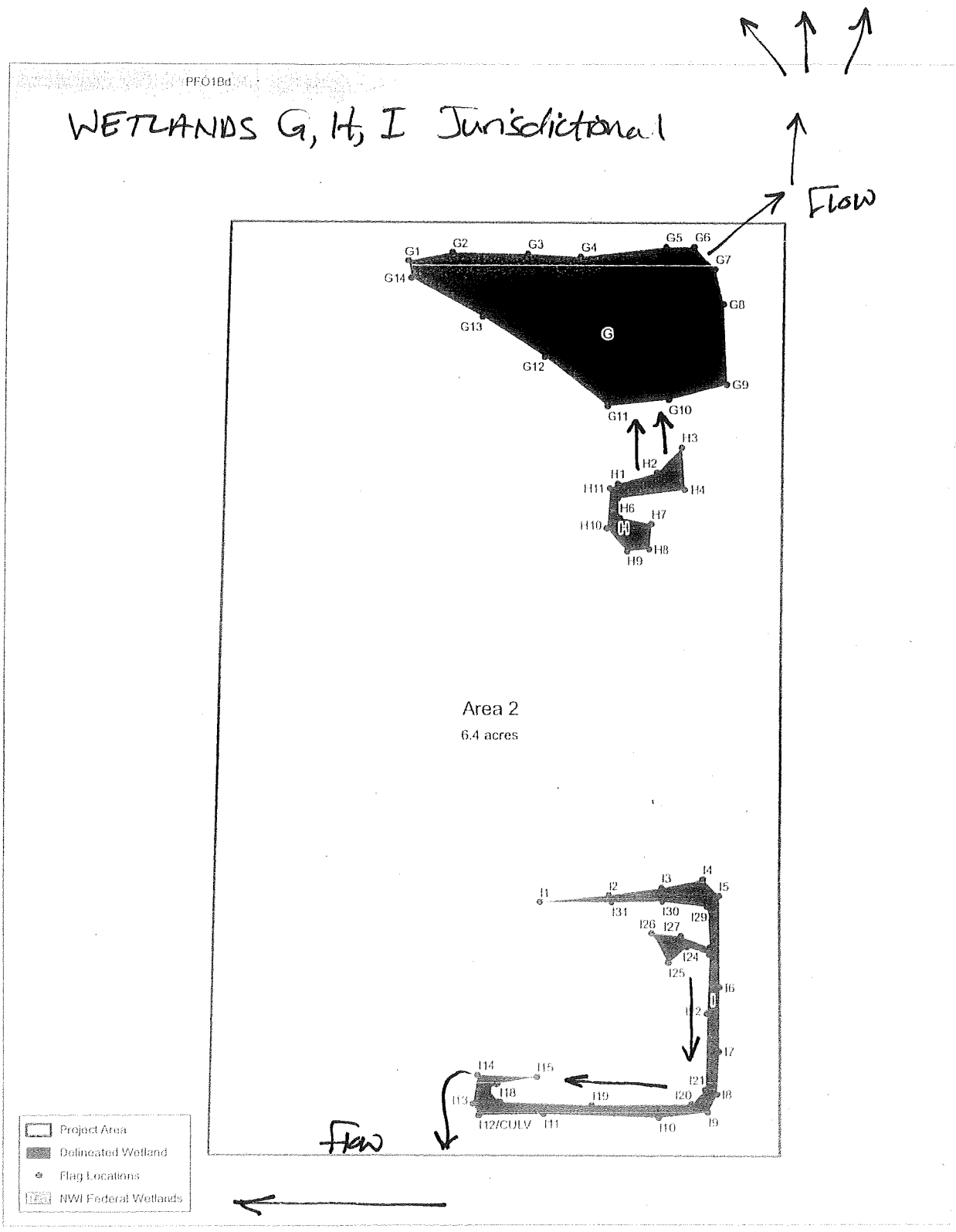
Town of Porter - Niagara County, New York

Wetland Delineation Report

Figure 8: Delineated Wetlands

Sheet 2 of 9

CWM
D/A Processing No. 2000-01534
Niagara County, New York
Quad: Ransomville
Sheet 4 of 9



CWM Landfill Expansion

Town of Porter - Niagara County, New York

Wetland Delineation Report

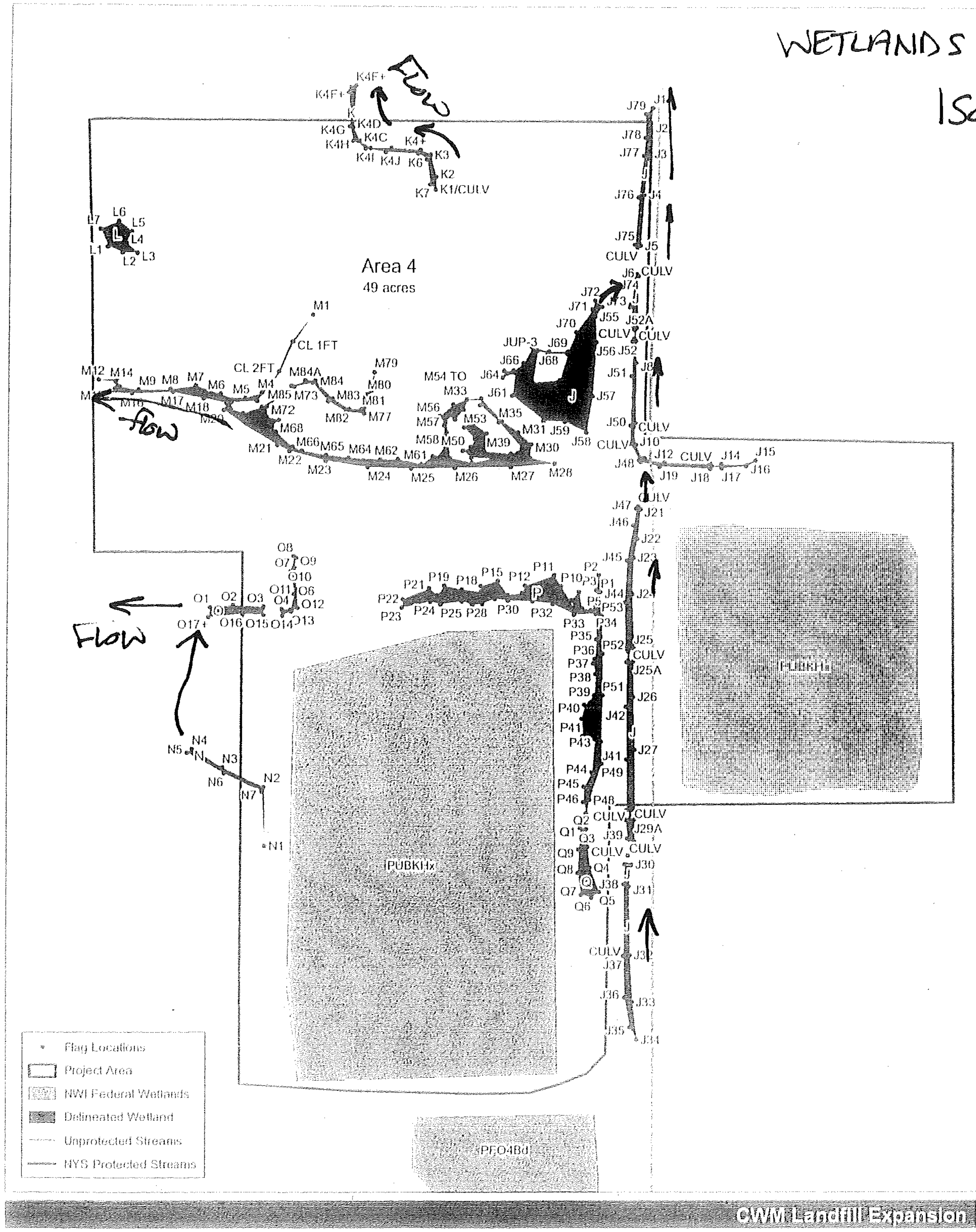
Figure 8: Delineated Wetlands

Sheet 4 of 11

CWM
D/A Processing No. 2000-01534
Niagara County, New York
Quad: Ransomville
Sheet 5 of 9

WETLANDS J, K, M, N, O
Jurisdictional

WETLANDS L, P, Q
Isolated



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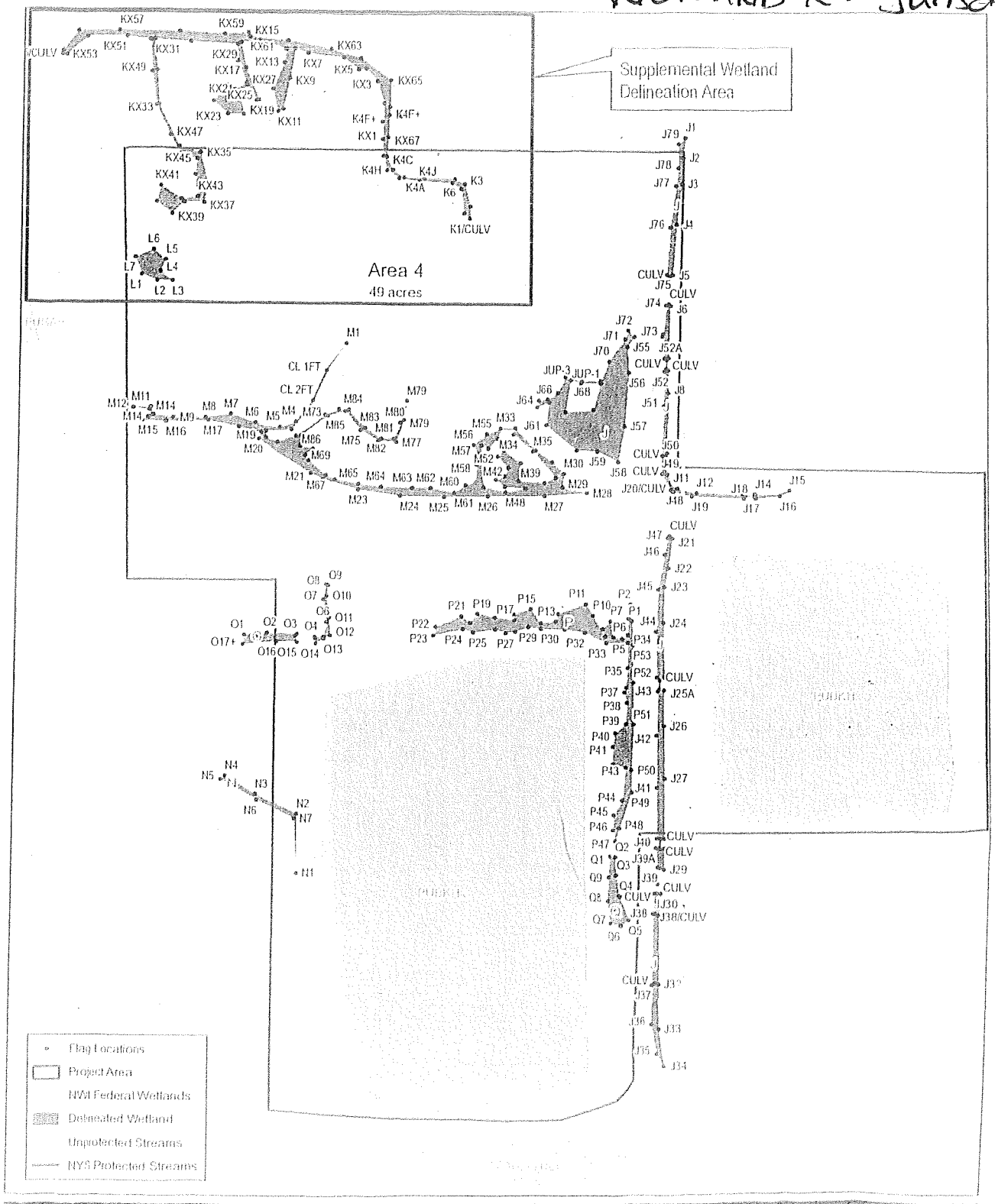
D/A Processing No. 2000-01534
Niagara County, New York
Quad: Ransomville
Sheet 6 of 9

WETLAND K: Jurisdictional



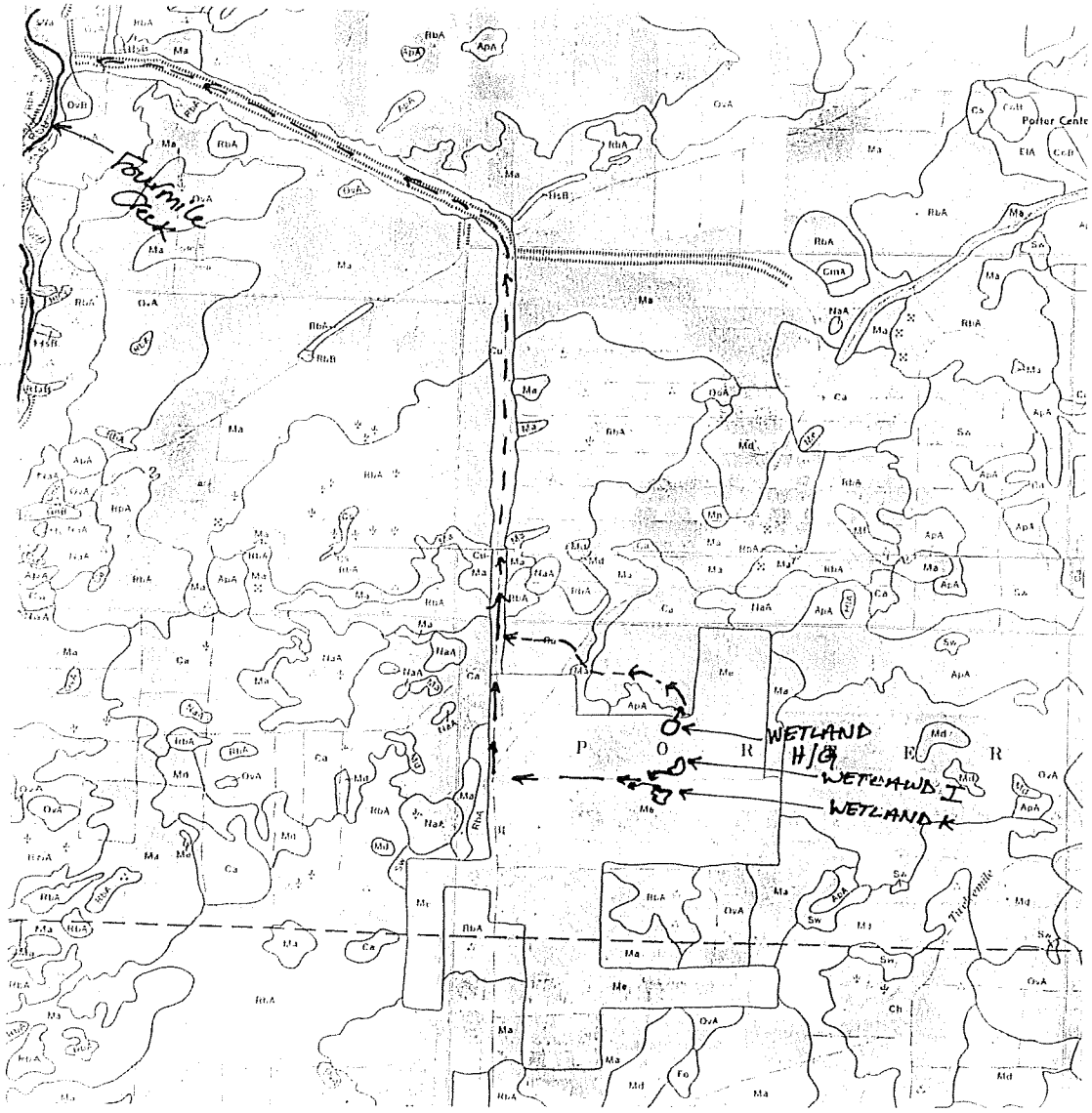
CWM Landfill Expansion

Town of Porter - Niagara County, New York

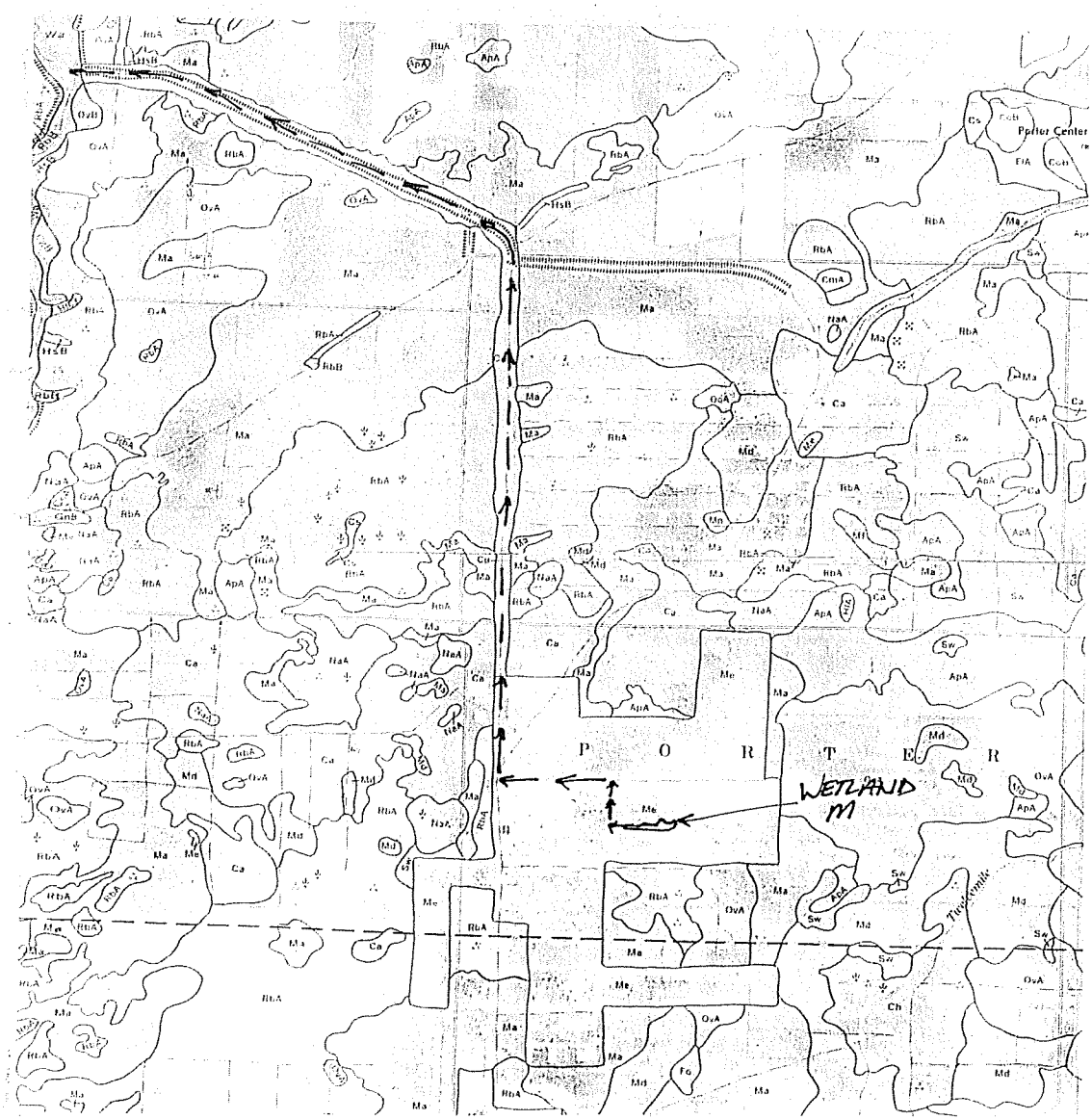
Wetland Delineation Report

Figure 8: Revised Delineated Wetlands

CWM
D/A Processing No. 2000-01534
Niagara County, New York
Quad: Ransomville
Sheet 7 of 9



CWM
D/A Processing No. 2000-01534
Niagara County, New York
Quad: Ransomville
Sheet 8 of 9



CWM
D/A Processing No. 2000-01534
Niagara County, New York
Quad: Ransomville
Sheet 9 of 9

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

October 15, 2012

Mr. Charles Rosenburg
New York State Department of
Environmental Conservation
Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: Request for Letter of Non-Jurisdiction

Dear Mr. Rosenburg:

On July 6, 2009, CWM Chemical Services, LLC, Model City Facility (CWM) submitted a wetlands delineation report prepared by Environmental Design & Research, P.C. (EDR) 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). The delineation report entitled "Wetland Delineation Report, RMU-2 Landfill Expansion Area", dated June 2009 was submitted by CWM in anticipation of submittal of a revised 6NYCRR Part 373 Permit Application to the New York State Department of Environmental Conservation (NYSDEC), which was submitted on November 19, 2009.

On April 29, 2011, CWM submitted a supplemental wetlands delineation to determine potential impacts to wetlands associated with the RMU-2 project in an area that was not previously delineated. As indicated in the wetland delineation report and supplemental report for RMU-2, no NYSDEC regulated wetlands are located within the project area. Additionally, the project area is not located within a 100-foot adjacent area to any NYSDEC regulated wetland.

On September 13, 2011, the Corps issued a notice of jurisdictional determination indicating that there are wetlands in the project area that are regulated under Section 404 of the Clean Water Act. CWM is currently preparing a Section 401 and 404 Joint Application which will include a draft mitigation plan for submittal to the Corps and the NYSDEC for federally regulated wetlands within the project area.

Subsequently, on August 29, 2012, CWM received comments from the NYSDEC via email pertaining to the Draft Environmental Impact Statement (DEIS) for the RMU-2 project. The DEIS, dated April 2003 (revised August 2009 and March 2012), was submitted in accordance with 6 NYCRR Part 617 regulations. The August 29, 2012 NYSDEC email contained the following comment pertaining to wetlands: "…….*the lack of state jurisdiction should be confirmed and a letter of non-jurisdiction from NYSDEC should be requested and obtained.*" By this letter, CWM is requesting a letter of non-jurisdiction from the NYSDEC. The NYSDEC, both Region 9 and Central Office, were previously provided copies of the report entitled "Wetland Delineation Report, RMU-2 Landfill Expansion Area", dated June 2009 and the supplemental wetlands evaluation report, dated April 2011, prepared by EDR.

Mr. Charles Rosenburg
NYSDEC
October 15, 2012
Re: Request for Letter of Non-Jurisdiction

CWM would greatly appreciate an expeditious review of the wetlands delineation reports and issuance of a non-jurisdictional determination. CWM welcomes the opportunity to discuss this matter with a NYSDEC wetlands specialist and/or tour the project areas at your earliest convenience in order to facilitate the NYSDEC non-jurisdictional determination.

Please call Mr. Jonathan Rizzo at (716) 286-0354 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 according to 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 for knowing violations."

Sincerely,
CWM CHEMICAL SERVICES, LLC

Jill A. Banaszak
Technical Manager
Model City Facility

JPR/JAB/jpr
Attachment

cc:
D. Denk	- NYSDEC/Region 9
D. Weiss	- NYSDEC/Region 9
B. Rostami	- NYSDEC/Region 9
M. Cruden	- NYSDEC/Albany, NY
T. Killeen	- NYSDEC/Albany, NY
M. Mortefolio	- NYSDEC/Albany, NY
G. Burke	- NYSDEC/Albany, NY
On-site Monitors	- NYSDEC/ Model City, NY
P. Flax	- USEPA/Region II
J. Devald	- NCHD/Lockport, NY
M. Mahar	- CWM/Model City, NY
R. Zayatz	- CWM/Model City, NY
S. Rydzyk	- CWM/Model City, NY
J. Hecklau	- EDR/Syracuse, NY
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

November 7, 2012

Mr. Charles Rosenburg
New York State Department of
Environmental Conservation
Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: Supplemental Delineation Proposed Drum Management Building Area

Dear Mr. Rosenburg:

On October 15, 2012, CWM Chemical Services, LLC, Model City Facility (CWM) submitted a request for a determination of non-jurisdiction for potential impacts associated with future construction of a new landfill, designated Residuals Management Unit No. 2 (RMU-2).

During the design process for the new Drum Management Building Environmental Design & Research, P.C. (EDR) performed a supplemental wetlands delineation in the area. Attached please find a Supplemental Wetland Delineation Report prepared by EDR, dated July 21, 2012 to assist you with your determination.

Please call Mr. Jonathan Rizzo at (716) 286-0354 or myself at (716) 286-0246 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 according to 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 for knowing violations."

Sincerely,
CWM CHEMICAL SERVICES, LLC

Jill A. Banaszak
Technical Manager
Model City Facility

JPR/JAB/jpr
Attachment

Mr. Charles Rosenburg
NYSDEC
November 7, 2012
Re: Supplemental Delineation Proposed Drum Management Building Area

cc:

D. Denk	- NYSDEC/Region 9
D. Weiss	- NYSDEC/Region 9
B. Rostami	- NYSDEC/Region 9
M. Cruden	- NYSDEC/Albany, NY
T. Killeen	- NYSDEC/Albany, NY
M. Mortefolio	- NYSDEC/Albany, NY
G. Burke	- NYSDEC/Albany, NY
On-site Monitors	- NYSDEC/ Model City, NY
P. Flax	- USEPA/Region II
J. Devald	- NCHD/Lockport, NY
K. Buckler	- USACE/Buffalo, NY
M. Mahar	- CWM/Model City, NY
R. Zayatz	- CWM/Model City, NY
S. Rydzyk	- CWM/Model City, NY
J. Hecklau	- EDR/Syracuse, NY
EMD Subject File	
Q & A	

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

November 7, 2012

Ms. Kathleen Buckler
U.S. Army Corps of Engineers
1776 Niagara Street
Buffalo, New York 14207-3199

Re: Supplemental Wetland Delineation

Dear Ms. Buckler:

On July 6, 2009, CWM Chemical Services, LLC, Model City Facility (CWM) submitted a wetlands delineation report prepared by Environmental Design & Research, P.C. (EDR) 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). The delineation report entitled "Wetland Delineation Report, RMU-2 Landfill Expansion Area", dated June 2009 was submitted by CWM in anticipation of submittal of a revised 6NYCRR Part 373 Permit Application to the New York State Department of Environmental Conservation (NYSDEC), which was submitted on November 19, 2009.

On April 29, 2011, CWM submitted a supplemental wetlands delineation to determine potential impacts to wetlands associated with the RMU-2 project in an area that was not previously delineated. On September 13, 2011, the Corps issued a notice of jurisdictional determination indicating that there are wetlands in the project area that are regulated under Section 404 of the Clean Water Act. CWM is currently preparing a Section 401 and 404 Joint Application which will include a draft mitigation plan for submittal to the Corps and the NYSDEC for federally regulated wetlands within the project area.

Subsequent to the Corps jurisdictional determination CWM continued with the preparation of the design for RMU-2 and a proposed new Drum Management Building. During the continuing preparation of the design, CWM identified a small portion of an intermittent drainage channel (Wetland M in Project Area 4) that was not included in the Corps September 13, 2011 jurisdictional determination. Additionally, the area of disturbance of the new Drum Management Building (Project Area 1) may be larger than shown on the June 2009 Wetland Delineation Report. Therefore, a supplemental wetlands delineation was performed by EDR in July 2012 to include the additional drainage channel (Wetland M) and a forested area north of the proposed new Drum Management Building location.

CWM anticipates that the additional drainage channel (Wetland M) will be within the area of disturbance for development of RMU-2. CWM also anticipates that the area of disturbance for the new Drum Management Building will be within the open field area of Project Area 1 and will not impact the forested wetlands identified to the north of the development area.

Attached please find a Supplemental Wetland Delineation Report for federal wetland M and the new Drum Management Building area for your review. Please advice CWM if the Corps will

require further information.

Please call Mr. Jonathan Rizzo at (716) 286-0354 or myself at (716) 286-0246 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 according to 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 for knowing violations."

Sincerely,
CWM CHEMICAL SERVICES, LLC

Jill A. Banaszak
Technical Manager
Model City Facility

JPR/JAB/jpr
Attachment

cc:

D. Denk	- NYSDEC/Region 9
D. Weiss	- NYSDEC/Region 9
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On-site Monitors	- NYSDEC/ Model City, NY
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R. Zayatz	- CWM/Model City, NY
S. Rydzyk	- CWM/Model City, NY
J. Hecklau	- EDR/Syracuse, NY
EMD Subject File	
Q & A	

edr COMPANIES

July 31, 2012

Mr. Jonathan Rizzo
Permitting Manager
CWM Chemical Services, LLC
1550 Balmer Road
Model City, New York 14107

RE: RMU-2 Expansion Area
Supplemental Wetland Delineation (Drum Wetland and Wetland M Extension)
edr Project No. 09022

Dear Mr. Rizzo:

On July 23, 2012, **edr** Companies (**edr**) conducted a supplemental wetland delineation at the CWM Chemical Services, LLC (CWM) Facility in the Town of Porter, Niagara County. This supplemental wetland delineation addresses two different areas related to recent Project changes which are located in Project Areas 1 and 4 within the proposed RMU-2 expansion area (see revised Figure 8, Sheets 2, 3, 8 and 9). Results of the delineation represent an addendum to the RMU-2 expansion delineation area conducted by **edr** in 2009 (**edr**, 2009).

The supplemental delineation work included field delineation of a forested wetland north of Project Area 1 due to changes in the design/site plan of the proposed Drum Management Building and an extension of the previously identified intermittent drainage channel (Wetland M) within Project Area 4. The field delineation at the proposed Drum Management Building included flagging of wetland boundaries, mapping the boundaries with a global positioning system (GPS) unit with reported sub-meter accuracy, and collecting data regarding vegetation, soils, and hydrology for each delineated wetland. The field delineation for the extension of Wetland M included the GPS mapping of the boundaries. Data collection was conducted in accordance with the criteria set forth in the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987), and the *2009 Interim Regional Supplement to the Corps of Engineers Manual: Northcentral and Northeastern Region* (USACOE, 2009).

As a result of the supplemental wetland delineation, approximately 1.77 acres of forested wetland (Drum Wetland) were added to Project Area 1 (See revised Figure 8, Sheets 8 and 9 attached) and an additional 95 l.f. (0.014 acre) of intermittent drainage channel. A description of the Drum Wetland is enclosed as an attachment to this letter along with supplemental wetland determination data sheets. Also enclosed is a revised photograph location map and photo log that includes photos of both the Drum Wetland and the Wetland M extension.

274 North Goodman Street, Rochester, New York 14607
P: 585.271.0040 :: F: 585.271.0042 :: www.edrcompanies.com

Drum Wetland

Located along the northern boundary of Area 1, the Drum Wetland is a forested wetland located north of a debris pile placed from grading and excavation in association with a clearing to the south. There are several shallow depressional areas extending north into the wetland from southern boundary, most likely due to the excavation activities. As stated, the delineated portion of this wetland totals approximately 1.77 acres, however, the wetland extends beyond the delineated area and outside of the study area into a NYSDEC protected wetland (RV-8). The Drum Wetland is dominated by forested wetland vegetation, including pin oak (*Quercus palustris*), American elm (*Ulmus americana*), green ash (*Fraxinus pennsylvanica*), *Salix sp.* and various wetland grasses (See enclosed Wetland Determination Sheets). Evidence of hydric soils includes a low chroma matrix color (10YR 4/2) at two sample points (Flag 22 and Flag 5) with a texture consistent with silt clay. Primary indicators of hydric soils could best be characterized as a depleted matrix (F3). Evidence of wetland hydrology in the wetland at the time of delineation included water marks (on bases of trees) and water stained leaves. It should be noted that climate conditions prior to the wetland delineation have been very dry and that soil samples were very difficult to sample due to dry, compact conditions. It is believed that the Drum Wetland is hydrologically connected to the larger State protected wetland to the north and into waters of the U.S. and is likely to be considered jurisdictional due to the natural flow between these wetlands.

Please contact me if you have any questions or require additional information.

Sincerely

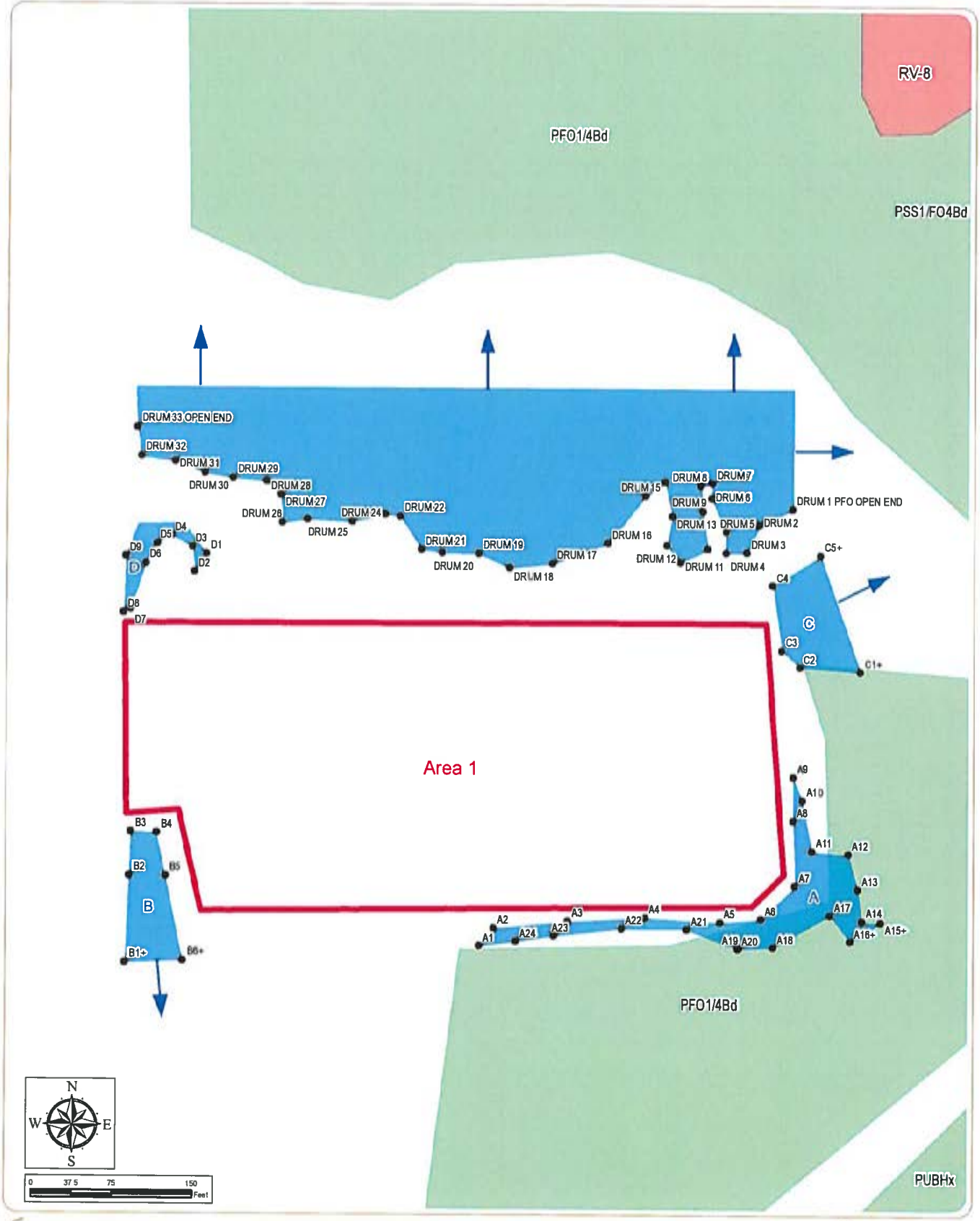
James B. Pippin
Environmental Project Manager

References

Environmental Design & Research, Landscape Architecture, Planning, Environmental Services, Engineering and Surveying, P.C. (**edr**, 2009). *Wetland Delineation Report*. Prepared for CWM Chemical Services.

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

U.S. Army Corps of Engineers. 2009 *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-09-19. Vicksburg, MS: U.S. Army Engineer Research and Development Center.



CWM Landfill Expansion
Town of Porter, Niagara County, New York

Figure 8: Revised Delineated Wetlands
Sheet 2 of 9

July 2012

- Flag Locations
- Project Site
- Delineated Wetland
- NYSDEC Wetland
- NWI Wetland

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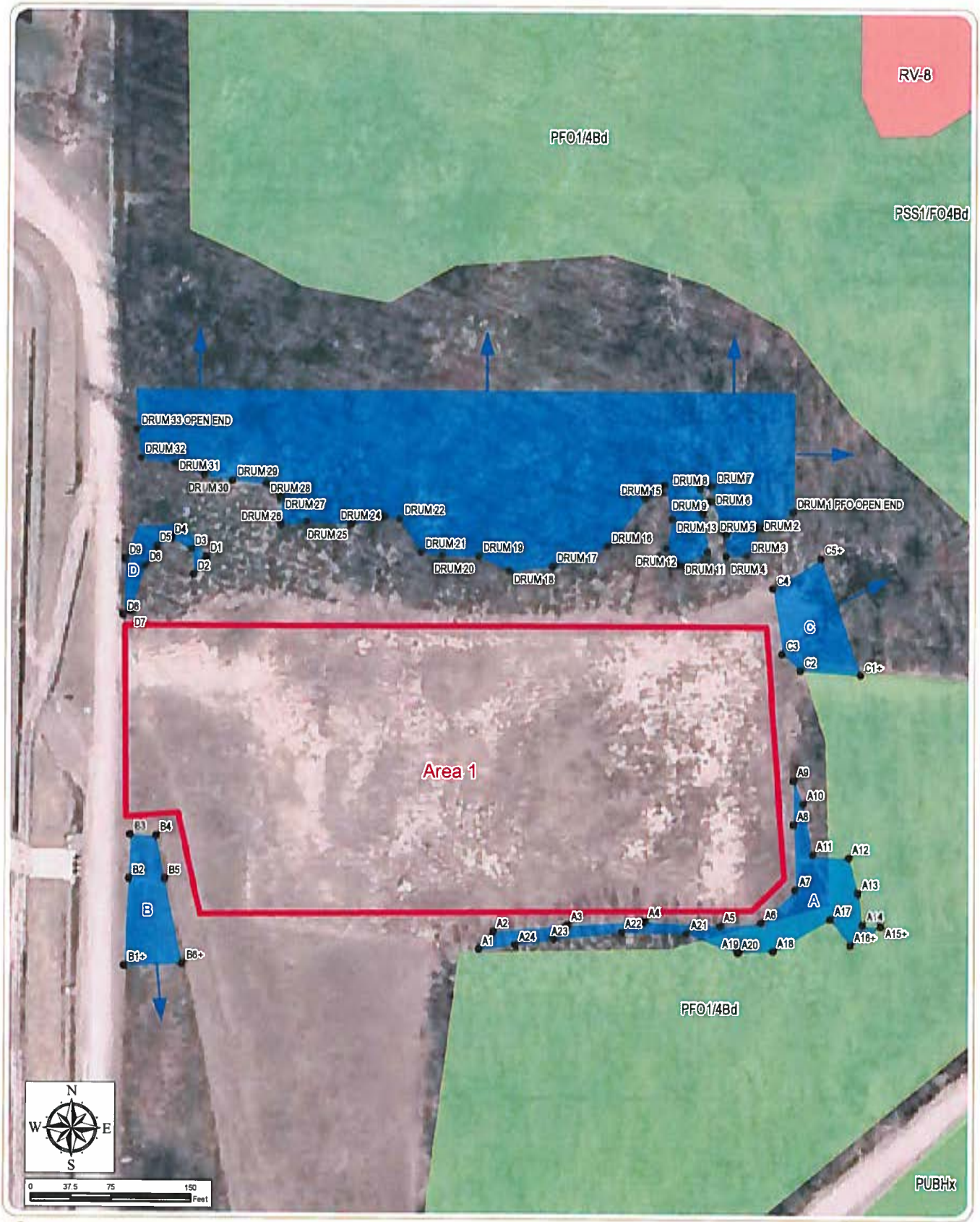

CWM Landfill Expansion
Town of Porter, Niagara County, New York

Figure 8: Revised Delineated Wetlands
Sheet 3 of 9
July 2012
Notes: Base map - 2 foot resolution natural color orthophotography, 2008

- Flag Locations
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