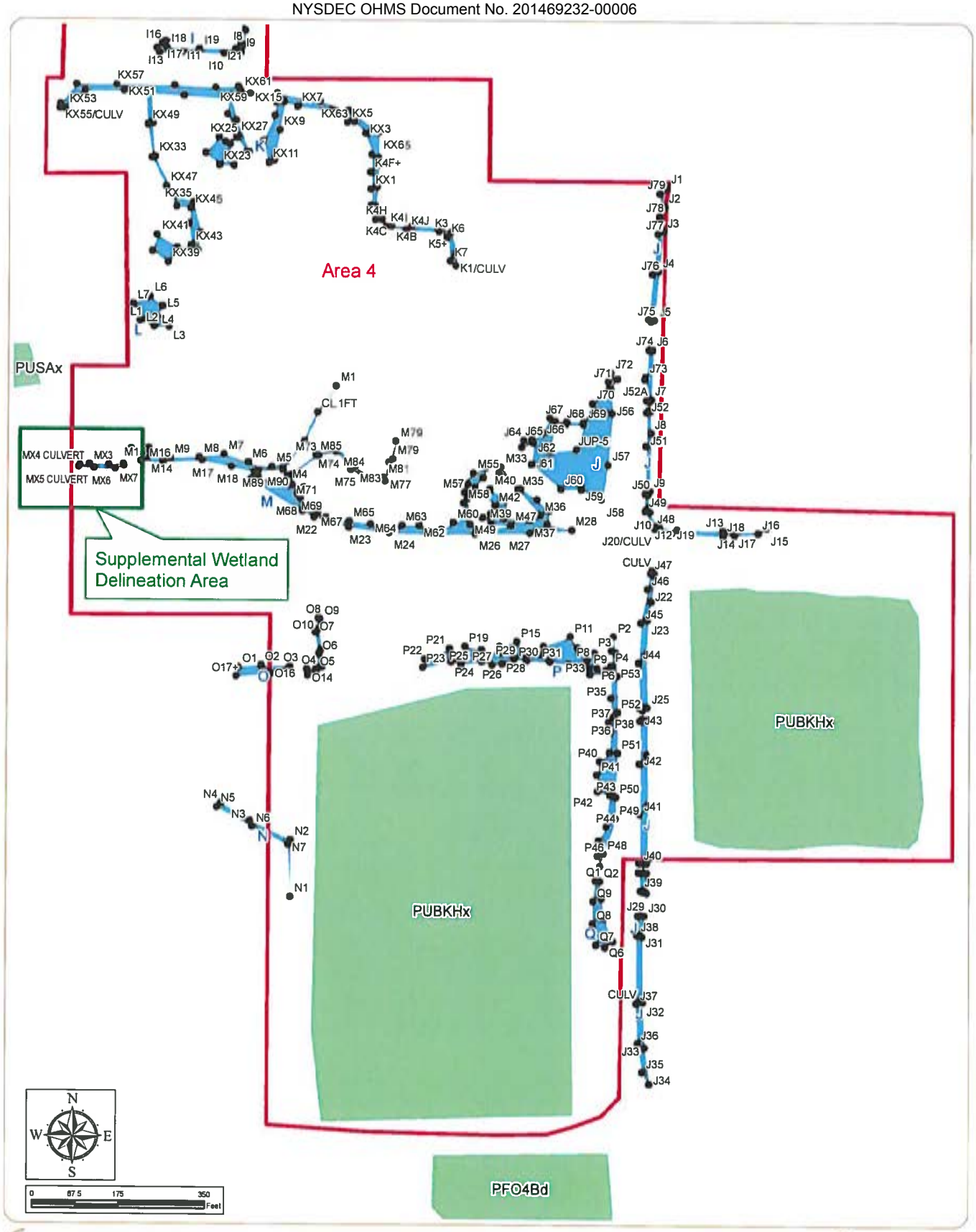

CWM Landfill Expansion
Town of Porter - Niagra County, New York

Figure 8 - Revised Delineated Wetlands
Sheet 8 of 9

July 2012

- Flag Locations
- Project Site
- NWI Wetland
- Delineated Wetland

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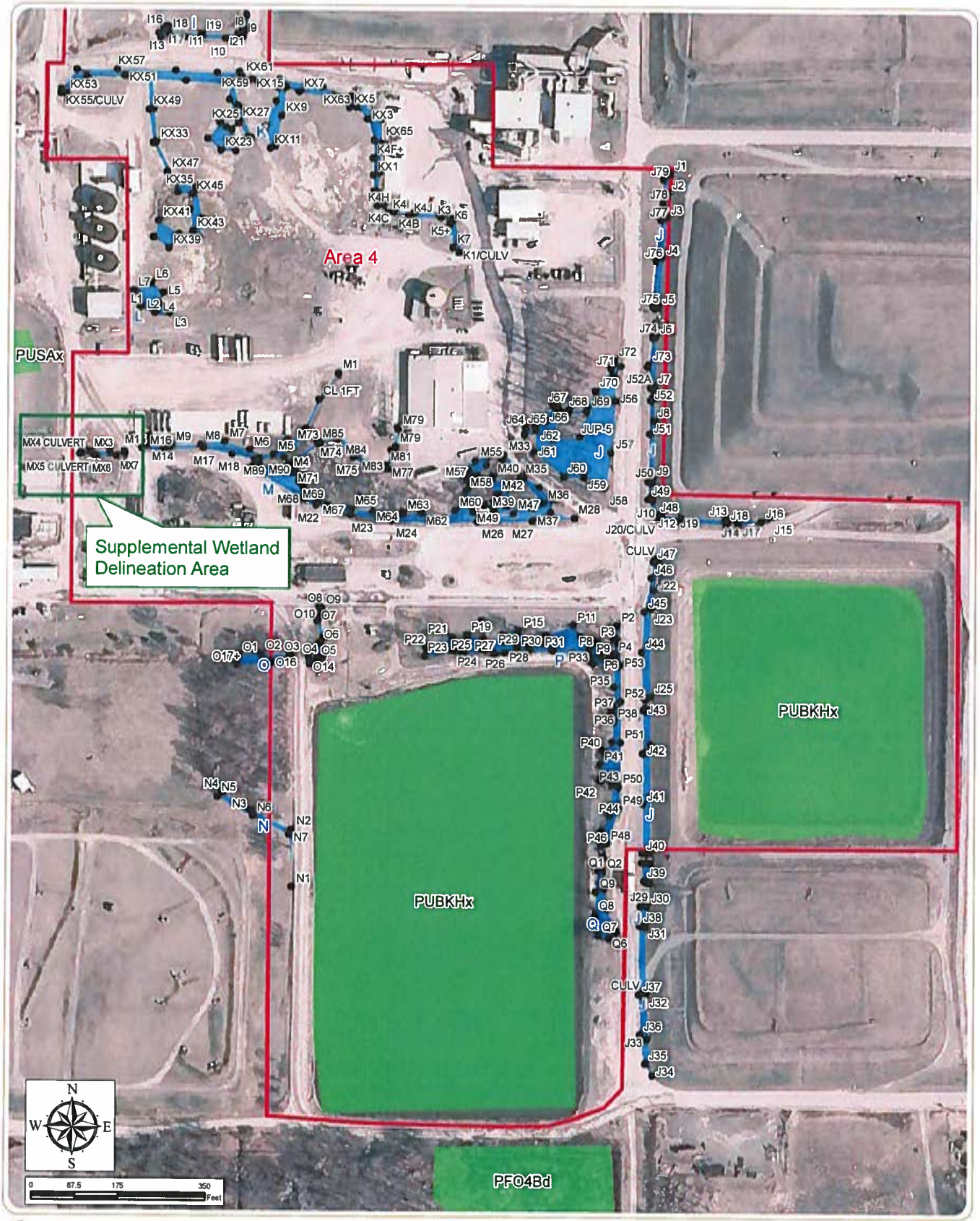

CWM Landfill Expansion
Town of Porter - Niagra County, New York

Figure 8 - Revised Delineated Wetlands
Sheet 9 of 9
July 2012
Notes: 2 foot resolution natural color orthophotography, 2008

- Flag Locations
- Project Site
- NWI Wetland
- Delineated Wetland

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PHOTO 01:

Forested Wetland at Flag Drum 5

PHOTO 02:

Alternate View 1 of Forested Wetland at Flag Drum 5

PHOTO 03:

Alternate View 2 of Forested Wetland at Flag Drum 5

PHOTO 04:

Forested Wetland at Sample Point 1

PHOTO 05:

Alternate View of Forested Wetland at Sample Point 1

PHOTO 06:

Wetland Soil Sample Test Pit at Sample Point 1

PHOTO 07:

Upland Forest at Upland Sample Point 1

PHOTO 08:

Upland Soil Sample Test Pit at Sample Point 1

PHOTO 09:

Forested Wetland at Sample Point 2

PHOTO 10:

Alternate View of Forested Wetland at Sample Point 2

PHOTO 11:

Wetland Soil Sample Test Pit at Sample Point 2.

PHOTO 12:

Upland Forest at Sample Point 2

PHOTO 13:

Alternate View of Upland Forest at Sample Point 2

PHOTO 14:

Upland Soil Sample Test Pit at Sample Point 2

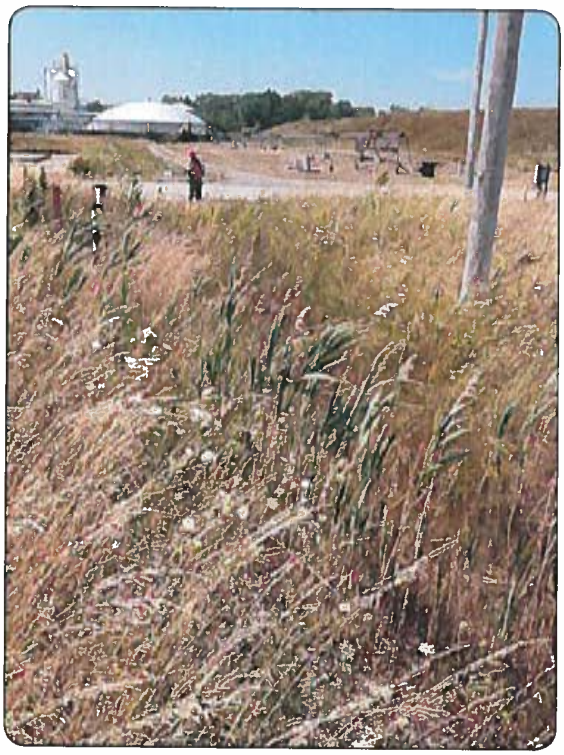

PHOTO 15:

Wetland M Extension Looking West

PHOTO 16:

Wetland M Extension Looking East

PHOTO 17:

Wetland M Extension Looking South

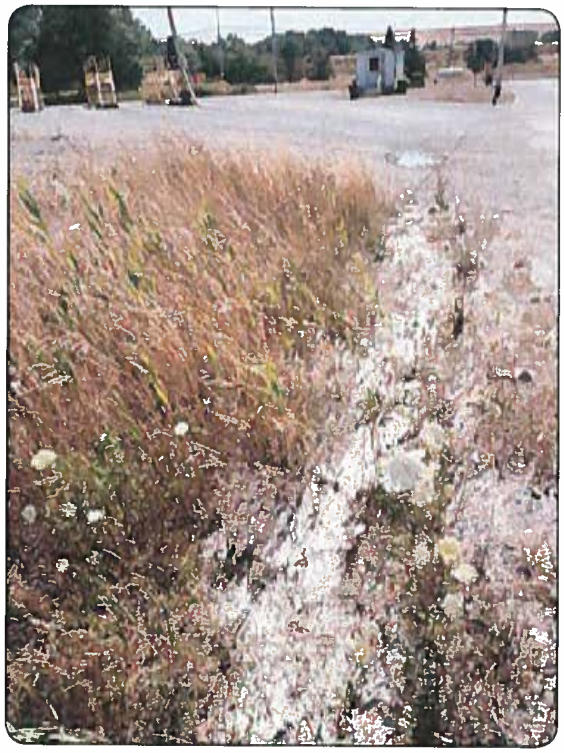

PHOTO 18:

Wetland M Extension Looking South

PHOTO 19:

Wetland M Extension at Terminus Looking East

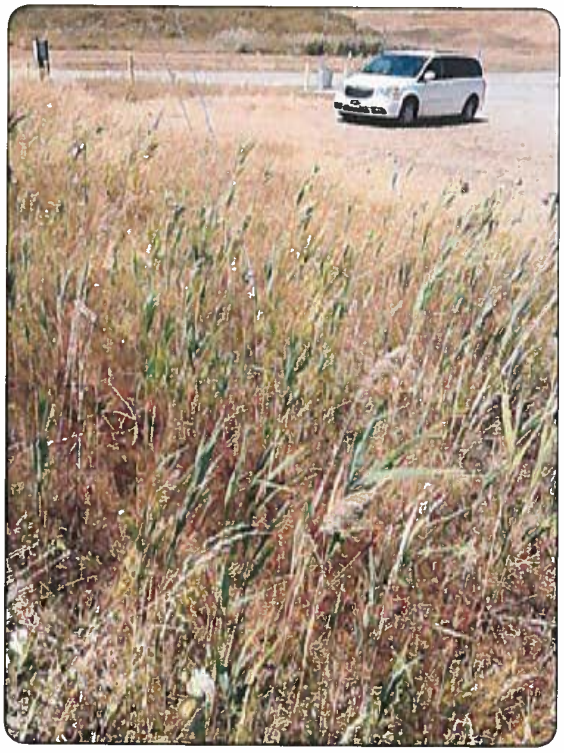

PHOTO 20:

Wetland M Extension Looking Northwest

PHOTO 21:

Wetland M Extension at Terminus Looking North

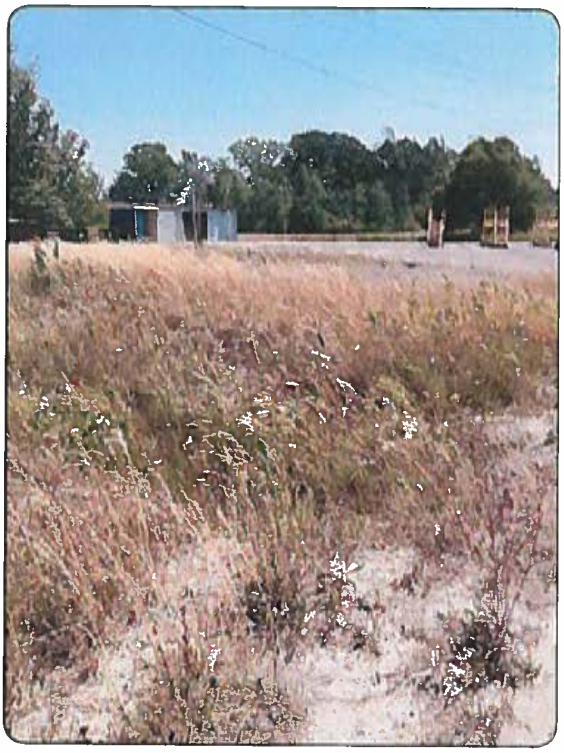

PHOTO 22:

Wetland M Extension at Terminus Looking South

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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: 7/23/12
County: Niagara
Applicant: CWM Chemical Services LLC
State: New York
Community: PFO wetland
Data Point ID (i.e. 2W@Wet. G): 1W@ Drum Wetland
Nearest Flag to Data Point: Drum ZZ

Investigator(s): Pippin / Martin

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 (%): 0-2%

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): 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 Chemical Services, LLC

Sampling Date: 7/23/2012
Data Point ID: Iw@ Drum wetland

Vegetation

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus palustris	75	yes	FacW
2. Ulmus americana	10	No	FacW
3. Fraxinus pennsylvanica	10	NO	FacW
4. Populus deltoides	30	yes	Fac
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Salix sp.	10	yes	FacW
2. Cornus racemosa	20	yes	Fac
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5-foot radius)			
1. Parthenocissus quinquefolia	10	NO	FacU
2. Wetland grass	25	yes	FacW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		

Woody Vine Stratum (Plot size: 30-foot radius)			
1. Toxicodendron radicans	20	yes	Fac
2.			
3.			
4.			
5.			
	= Total Cover		

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

Project Number: 09022 Sampling Date: 7/23/2012

Applicant: CWM Chemical Services, LLC Data Point ID: Inlet Drum wetland

Soil Map Unit: _____

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	Frequency[1]	Type[2]	Loc[3]	Texture, Structure, Other
0-10+	10YR 4/2		N/A				Silt

[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[4]

___ 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): _____

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

Remarks

Ground is dry at hard packed. A good soil sample was difficult to obtain.

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
Is the wetland a mapped state wetland? Yes (No)

If yes, indicate classification PFO 1/4 Bd
If yes, indicate wetland ID _____

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Syracuse, New York 13202

274 North Goodman Street
Rochester, New York 14607

DATA FORM
ROUTINE WETLAND DETERMINATION
Northcentral and Northeast Regional Supplement

Project Number: 04022 Town: Porter Sampling Date: 7/23/2012

County: Niagara

Applicant: Cwm Chemical Services, LLC State: New York Community: Upland Forest

Data Point ID (i.e. 2W@Wet. G): 1W@ Drum wetland Nearest Flag to Data Point: Drum 22

Investigator(s): Pippin / Martin

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 (%): 5%

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 No hydrology observed.

Project Number: 09022
Applicant: CWM Chemical Services, LLC

Sampling Date: 7/23/2012
Data Point ID: Inf Drum Wetland

Vegetation

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus deltoides	60	yes	FAC
2. Quercus palustris	10	NO	FACW
3.			
4.			
5			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Cornus racemosa	75	yes	FAC
2.			
3.			
4.			
5			
	= Total Cover		

Herb Stratum (Plot size: 5-foot radius)			
1. N/A			
2.			
3.			
4.			
5			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		

Woody Vine Stratum (Plot size: 30-foot radius)			
1. Toxicodendron radicans	30	yes	FAC
2. Parthenocissus quinquefolia	30	yes	FACU
3.			
4.			
5			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ Rapid Test for Hydrophytic Vegetation
__ Dominance Test >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
Applicant: CWM

Sampling Date: 7/23/2012
Data Point ID: 1W@ Drum wetland

Soil Map Unit: _____

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
0-3[1]	10YR 4/4		—				Silt

[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)

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

Restrictive Layer (if observed)

Type: _____
Depth (inches): _____

Remarks

Spoil pile. Too dry & compacted to sample - non-hydric

Wetland Determination

Hydrophytic Vegetation Present? Yes (No) N/A
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
Is the wetland a mapped state wetland? Yes No

If yes, indicate classification _____
If yes, indicate wetland ID _____

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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: 7/23/2012
County: Niagara
Applicant: CWM Chemical Services State: New York Community: PTO
Data Point ID (i.e. 2W@Wet. G): 2W@Drum Wetland Nearest Flag to Data Point: Drum 5

Investigator(s): Rippin / Martin

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 (%): 0-2%

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): N/A
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: Clum Chemical Services, LLC

Sampling Date: 7/23/2012
Data Point ID: 2ws@ Drum wetland

Vegetation

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus deltoides	30	yes	FAC
2. Ulmus americana	30	yes	FACW
3. Quercus palustris	10	NO	FACW
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Fraxinus pennsylvanica	20	yes	FACW
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5-foot radius)			
1. wetland grass	5	yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		

Woody Vine Stratum (Plot size: 30-foot radius)			
1. Vitis sp.	20	yes	FAC
2.			
3.			
4.			
5.			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:
__ Rapid Test for Hydrophytic Vegetation
__ Dominance Test >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

very thin herb/shrub layer

Project Number: 09022
Applicant: Clean Chemical Services, LLC

Sampling Date: 7/23/2012
Data Point ID: Swale Drum Wetland

Soil Map Unit: _____

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Frequency[1]	Type[2]	Loc[3]	Texture, Structure, Other
0-8"+	10YR 4/2		N/A				Silt

[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[4]

___ 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

Hard, compact soil due to lack of recent precip.

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
Is the wetland a mapped state wetland? Yes (No)

If yes, indicate classification PFO1/4bd
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: 7/3/2012
County: Niagara
Applicant: Curtin Chemical Services, LLC State: New York Community: Upland forest

Data Point ID (I.e. 2W@Wet. G): 2wc Drum Wetland Nearest Flag to Data Point: Drum 5

Investigator(s): Rippin/Martin

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 (%): _____

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): N/A
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

No hydrology observed.

Project Number: 09022
Applicant: CWM Chemical Services, LLC

Sampling Date: 7/23/2012
Data Point ID: Z14 @ Drum wetland

Vegetation

Tree Stratum (Plot size: 30-foot radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ulmus americana	10	NO	FACW
2. Populus deltoides	30	yes	FAC
3.			
4.			
5.			
	= Total Cover		

Sapling/Shrub Stratum (Plot size: 15-foot radius)			
1. Cornus Palemosa	75	yes	FAC
2.			
3.			
4.			
5.			
	= Total Cover		

Herb Stratum (Plot size: 5-foot radius)			
1. Toxicodendron radicans	75	yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	= Total Cover		

Woody Vine Stratum (Plot size: 30-foot radius)			
1. Toxicodendro radicans	25	yes	FAC
2. Parthenocissus quinquefolia	75	yes	FACU
3.			
4.			
5.			
	= Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (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
Applicant: CWM Chemical Services, LLC
Sampling Date: 7/23/2012
Data Point ID: Zu @ Drum wetland
Soil Map Unit: _____

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)	Frequency[1]	Type[2]	Loc[3]	Texture, Structure, Other
0-8"+	10YR 4/3		N/A				Si L

[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)

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

Restrictive Layer (if observed)

Type: _____
Depth (inches): _____

Remarks

Non hydric soils

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 _____

New York State Department of Environmental Conservation
Division of Fish, Wildlife and Marine Resources, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2915
Phone: (716) 851-7010 • **FAX:** (716) 851-7053
Website: www.dec.ny.gov

Joe Martens
Commissioner

November 28, 2012

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Jonathan P. Rizzo, Permitting Manager
Waste Management
1550 Balmer Road
Model City, New York 14107

Dear Mr. Rizzo:

Wetland RV-8
Boundary Delineation
Town of Porter, Niagara County

This letter serves as notification that I verified the wetland delineation conducted by EDR Companies (EDR) of Wetland RV-8 within the proposed Chemical Waste Management landfill expansion area, parcel 61.00-2-1, on November 6, 2012. The wetland boundary is identified with pink plastic flagging consecutively numbered DRUM 1 through DRUM 33 and C1 through C5 as shown on EDR's Figure 8 "Revised Delineated Wetlands", as well as the enclosed map. Please note that Wetland C has a direct connection to the main body of Wetland RV-8 and is therefore state jurisdictional but Wetlands A, B, and D are not state jurisdictional. Also, please beware that wetland boundaries may change over time and this map does not fix the wetland boundary indefinitely.

If you would like to document the precise boundary of the wetland relative to your property boundary, it is your responsibility to have the wetland boundary surveyed. If you choose to complete a survey, the wetland boundary survey map should be submitted to me for verification. A copy of this Department's Requirements for Wetland Survey and Mapping is enclosed. Please note that a surveyed wetland boundary that has been verified by this Department will be considered valid for five years.

In 1975, the New York State Legislature passed the Freshwater Wetlands Act to preserve and protect wetlands and their functions, such as flood protection and fish and wildlife habitat. The New York State Department of Environmental Conservation is required to map all wetlands protected by this law, and to make those maps available for inspection in all local government clerks' offices. Certain activities within the wetland or its regulated 100-foot adjacent area require a permit from this Department, including but not limited to filling, clearing vegetation, draining, and construction. Contact our Division of Environmental Permits for information regarding permit requirements at:

New York State Department of Environmental Conservation
Division of Environmental Permits
270 Michigan Avenue
Buffalo, New York 14203-2915
Telephone: (716) 851-7165

Please be advised that this Department plans to amend the Freshwater Wetlands Map for Niagara County to better illustrate the boundary of Wetland RV-8 based on this wetland delineation. We will publish notice of the proposed amendment in the Department's Environmental Notice Bulletin and in two local newspapers on a later date. In addition, all affected landowners will be notified by certified mail. Affected landowners, local government officials, and other interested parties may comment to this Department on the proposed map amendment now or at the time of the published notices.

In addition, the U.S. Army Corps of Engineers may also have wetland jurisdiction irrespective of the Department of Environmental Conservation. For more information, you may contact the Corps at:

United States Army Corps of Engineers Regulatory Branch
1776 Niagara Street
Buffalo, New York 14207
Telephone: (716) 879-4330

If you have any questions about this wetland delineation, please feel free to call me in the Buffalo office at (716) 851-7010.

Sincerely,

Charles P. Rosenburg

Charles P. Rosenburg
Senior Ecologist
Region 9

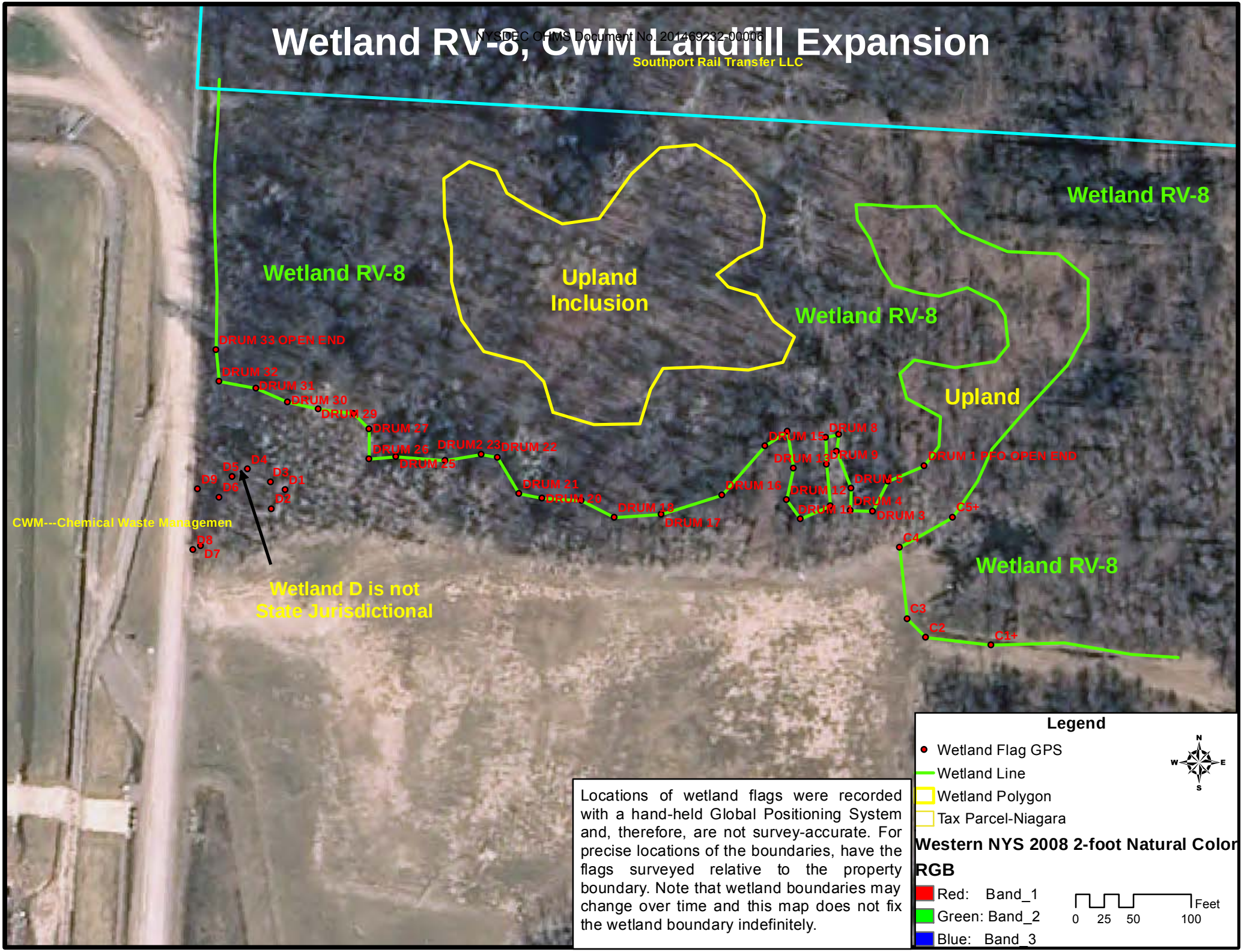
CPR/jmm

Enclosures: Wetland RV-8 Delineation Map, NYSDEC Region 9 Survey Requirements

cc: Mr. Mark Kandel, NYSDEC, Regional Wildlife Manager
Lt. James R Schultz, NYSDEC Division of Law Enforcement
Mr. Jim Pippin, EDR Companies
Porter Town Clerk
Porter Town Supervisor
Niagara County Clerk
Niagara County Executive
Wetland RV-8 file

Wetland RV-8, CWM Landfill Expansion

Southport Rail Transfer LLC



Locations of wetland flags were recorded with a hand-held Global Positioning System and, therefore, are not survey-accurate. For precise locations of the boundaries, have the flags surveyed relative to the property boundary. Note that wetland boundaries may change over time and this map does not fix the wetland boundary indefinitely.

Legend

- Wetland Flag GPS
- Wetland Line
- Wetland Polygon
- Tax Parcel-Niagara

Western NYS 2008 2-foot Natural Color RGB

- Red: Band_1
- Green: Band_2
- Blue: Band_3

0 25 50 100 Feet

New York State Department of Environmental Conservation
Division of Fish, Wildlife and Marine Resources, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2915
Phone: (716) 851-7010 • **FAX:** (716) 851-7053
Website: www.dec.ny.gov

Joe Martens
Commissioner

February 4, 2013

Mr. Jonathan P. Rizzo, Permitting Manager
Waste Management
1550 Balmer Road
Model City, New York 14107

Dear Mr. Rizzo:

Freshwater Wetlands Jurisdiction
CWM Residuals Management Unit No. 2
Town of Porter, Niagara County

This letter serves as a supplement to the November 28, 2012 letter I sent to you regarding delineation of the Freshwater Wetland RV-8 boundary within the CWM Residuals Management Unit No. 2 (RMU-2). That letter did not specifically address New York State Department of Environmental Conservation (NYSDEC) freshwater wetlands jurisdiction elsewhere within the RMU-2. Please note that I concur with EDR's assessment that there are no other areas of NYSDEC freshwater wetlands jurisdiction within the RMU-2 development area.

If you have any additional questions about NYSDEC freshwater wetlands jurisdiction, please feel free to call me in the Buffalo office at (716) 851-7010.

Sincerely,

Charles P. Rosenburg

Charles P. Rosenburg
Senior Ecologist
Region 9

CPR/jmm

cc: Ms. Lisa Porter, NYSDEC Division of Environmental Permits
Mr. Jim Pippin, EDR Companies
Wetland RV-8 file